

Jet Propulsion Laboratory  
California Institute of Technology  
4800 Oak Grove Drive  
Pasadena, California 91109-8099  
(818) 354 4321

**JPL**  
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NASA - JPL  
SSIC No. 9661  
**FILE 001!**

July 29, 1998

Refer to: 98045SF.DOC

Mark Ripperda  
U.S. EPA, Region IX  
75 Hawthorne Street, M/S SFD-8-3  
San Francisco, CA 94105

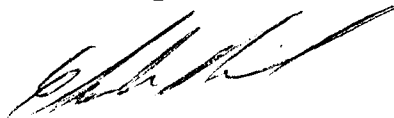
Subject: RPM Meeting Minutes from July 16, 1998

Dear Mark:

On behalf of the National Aeronautics and Space Administration (NASA), I am pleased to provide the minutes from the RPM Meeting of July 16, 1998. As always, the minutes are open for comments.

If you have any questions or comments regarding these minutes please feel free to contact me or Judy Novelly at (818) 354-0180 or (818) 354-8634 respectively.

Sincerely,



Charles L. Buril, P.E.  
Manager, Environmental Affairs Office

Enclosure

cc: Peter Robles, Jr.  
Richard Atwater  
Steven Niou

bcc:  
K. Lievense  
B. Lathrop-Pino  
S. Pool  
N. Walizer  
P. Zbylut  
B. Meltzer  
J. Novelly  
R. Roberts  
M. Wolfenbarger  
cc: D. Gant

Mark Cutler, Foster Wheeler  
Vithal Hosangadi, Foster Wheeler  
B.G. Randolph, Foster Wheeler

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Richard Gebert  
Cal EPA  
1011 N. Grandview Avenue  
Glendale, CA 91201

Subject: RPM Meeting Minutes from July 16, 1998

Dear Richard:

On behalf of the National Aeronautics and Space Administration (NASA), I am pleased to provide the minutes from the RPM Meeting of July 16, 1998. As always, the minutes are open for comments.

If you have any questions or comments regarding these minutes please feel free to contact me or Judy Novelly at (818) 354-0180 or (818) 354-8634 respectively.

Sincerely,

A handwritten signature in black ink, appearing to read "C. L. Buri".

Charles L. Buri, P.E.  
Manager  
Environmental Affairs Office

CLB:klp

cc: Peter Robles, Jr.

Jet Propulsion Laboratory  
California Institute of Technology  
4800 Oak Grove Drive  
Pasadena, California 91109-8099  
(818) 354-4321



July 29, 1998

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Alex Carlos  
L.A. Regional Water Quality Control Board  
101 Centre Plaza Drive  
Monterey Park, CA 91754

Subject: RPM Meeting Minutes from July 16, 1998

Dear Alex:

On behalf of the National Aeronautics and Space Administration (NASA), I am pleased to provide the minutes from the RPM Meeting of July 16, 1998. As always, the minutes are open for comments.

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Sincerely,

A handwritten signature in dark ink, appearing to read "Charles L. Buril".

Charles L. Buril, P.E.  
Manager  
Environmental Affairs Office

1  
2  
3 REMEDIAL PROJECT MANAGERS' MEETING

4 NASA/JET PROPULSION LABORATORY

5 16 July 1998  
6  
78 ATTENDEES:  
9

10 Charles L. Buril, JPL

11 Alex Carlos, RWQCB-LA

12 Mark Cutler, Foster Wheeler

13 Richard Gebert, DTSC

14 Vitthal S. Hosangadi, Foster Wheeler

15 Stephen Niou, URS

16 Judith A. Novelly, JPL

17 B.G. Randolph, Foster Wheeler

18 Mark Ripperda, USA EPA

19 Peter Robles, Jr., NASA  
20  
21  
22  
23  
24

25 Reported by: Lester R. Linn, Jr., CSR 1054

1 Pasadena, California

2 July 16, 1998

3 10:08 A.M.

4  
5 BURIL: Welcome everybody. I think everyone  
6 knows each other, so we don't need introductions  
7 around.

8 Let's go ahead and jump into the first one  
9 on the agenda, the status of the Calgon pilot.  
10 Where we're at right now, we have got a contract  
11 with Calgon and basically we're waiting for them to  
12 finish the work that they're doing for the San  
13 Gabriel Valley Basin right now. That's over in --  
14 what is it? Baldwin Park?

15 ROBLES: Dalton.

16 BURIL: The Big Dalton site. That site has very  
17 little VOCs, in the tens of parts per billion, and  
18 perchlorate at about 60-some odd, plus or minus a  
19 few. Thus far, after talking with the technicians  
20 that are working the site, they appear to have some  
21 very, very positive results.

22 In fact, the system is basically running  
23 hands off. They don't have to do a thing to it. It  
24 runs itself, which is the kind of thing I'd like to  
25 be able to have for an ultimate kind of system,

2

1 something you don't need to worry about, someone  
2 there tweaking it on a regular basis.

3 Their test there is supposed to be  
4 complete the end of next week, which is, I believe,  
5 the 27th. And we are expecting to have them move  
6 here on our site the week of August 3rd. Now,  
7 that's the mobilization and getting things all set  
8 up.

9 Foster Wheeler is also providing support  
10 on this particular program. They are supplying me  
11 the groundwater pumps and some storage tanks for  
12 various things and some good advice kind of in the  
13 background as to how things are getting put  
14 together. We anticipate right now that sometime  
15 during either the week of the 3rd or the 10th we  
16 will actually be processing water through the ISEP  
17 system. In that regard, we are currently planning  
18 to discharge to the storm sewer, which I wanted to  
19 be sure that I made mention of. Our current  
20 sampling schedule for the discharge out of the ISEP  
21 system is, if memory serves correctly, twice a day  
22 for the entire time that we're operating the system.

23 RIPPERDA: That means you fill up tanks and then  
24 you discharge the tanks twice a day?

25 BURIL: No. Actually, no. We're just going to

3

1 be discharging directly. The tankage that would be  
2 required to do that would be huge, just huge. So  
3 we're going to be sampling it twice a day on a  
4 running basis.

5 Everything that's come out of the San  
6 Gabriel site so far, just based on verbal  
7 conversations, has indicated the stuff is better  
8 than the water we get out of the ground, as it is.  
9 It's lower conductivity. The nitrates are almost  
10 non-existent. Perchlorate's gone. VOCs are gone.  
11 The stuff is ready to be bottled and sold in the  
12 store kind of thing. It's exceptionally good  
13 quality water.

14 I just wanted to verify that that approach  
15 thus far is still acceptable to everybody and just  
16 kind of offer up an invitation to all of you to come  
17 up and see the system. I think it would be very  
18 valuable. Alex, you've already seen it in Baldwin  
19 Park. The system that we have here at JPL isn't  
20 going to be any different. In fact, it is exactly  
21 the same equipment. And I'm very hopeful that we'll  
22 actually see some very positive results out of this  
23 thing because we would like to implement some form  
24 of remediation as soon as possible and this is kind  
25 of the silver bullet for perchlorate I'm hopeful of

4

1 seeing.

2 GEBERT: Chuck, do you have any information or  
3 literature on this process --

4 BURIL: Yes, I do. I have some down in my  
5 office.

6 GEBERT: -- you can give to us?

7 BURIL: Yes, I do. I have some down in my  
8 office.

9 GEBERT: I appreciate it.

10 BURIL: It will be no problem to provide that to  
11 you. I'm just trying to think. I may be able to  
12 get some of the original stuff from Calgon sent to  
13 you or you can make copies of what I have. Either  
14 way. Whatever you prefer.

15 GEBERT: Maybe the originals sent.

16 BURIL: All right. We'll get hold of Calgon.  
17 In fact, I'm looking at the clock because the  
18 project manager for Calgon is flying out here today  
19 and I'm meeting with her tomorrow. I don't think I  
20 can catch her, though. I think she's already left.

21 GEBERT: Okay.

22 BURIL: We can get some out here.

23 GEBERT: So I can get them before the test.

24 BURIL: Sure. I don't think that's a problem at  
25 all.

5

1 Any questions as far as the process itself  
 2 goes? Overall we're talking about a two-month long  
 3 test and we're going to be sampling at two locations  
 4 here on Lab, our MW-7 well and our MW-16 well. Both  
 5 of those have the highest perchlorate and/or highest  
 6 VOCs levels on the site.  
 7 NIOU: Which are the two wells?  
 8 BURIL: MW-7 and MW-16.  
 9 GEBERT: That's the reason they were chosen  
 10 because --  
 11 BURIL: Because they are the highest, yes.  
 12 RIPPERDA: Are you going to be producing from  
 13 both at the same time?  
 14 BURIL: No. We're going to do one, then the  
 15 other.  
 16 RIPPERDA: Like you're going to start more or  
 17 less --  
 18 BURIL: You got it. Exactly. We're going to  
 19 start off with the lower concentration of  
 20 perchlorate to see how well the system responds to  
 21 that. It's basically a 10-fold increase over what  
 22 they're doing at Baldwin Park right now. Then we're  
 23 going to be moving on to the next one, which is  
 24 twice the concentration that our first well is.  
 25 That's our MW-16. We're up near 1200 ppm there.

6

1 RIPPERDA: How do they think it's going to  
 2 handle the 10-fold increase? Do they have to put in  
 3 more, whatever, cells or units or change up the  
 4 resin --  
 5 BURIL: The thing that they're anticipating  
 6 right now is that it will probably require a greater  
 7 amount of regeneration.  
 8 Is everyone familiar on how ion exchange  
 9 works?  
 10 RIPPERDA: Pretty much.  
 11 GEBERT: More or less.  
 12 RIPPERDA: College chemistry familiarity --  
 13 BURIL: Yes. I got my trial and error at Edison  
 14 in dealing with all the exchange technologies for  
 15 boiler water and things.  
 16 But basically what they're anticipating is  
 17 that the regeneration rates will increase. And  
 18 depending upon the rate of exhaustion of the resin  
 19 itself, based on the regeneration efficiency, we may  
 20 have more change out of that. But that's really  
 21 what the test is about, is to figure out just what  
 22 that kind of regeneration rate and exhaustion rate  
 23 is all about.  
 24 RIPPERDA: What kind of volume of concentrated  
 25 brine are you going to end up with?

7

1 BURIL: Well, right now we're anticipating only  
 2 about half a percent of the total flow through the  
 3 system. So on a daily basis, maybe about -- let's  
 4 see. 1400 gallons or, excuse me, 6,000 gallons a  
 5 day. Half a percent. So about three gallons.  
 6 CARLOS: Per day.  
 7 BURIL: Per day, yes. We've already made  
 8 arrangements with a familiar disposal company to  
 9 come in and just take that off.  
 10 Another part of this, though, that's  
 11 somewhat exciting and something that someone, to my  
 12 knowledge, has not done yet, and I think this makes  
 13 the JPL pilot one of the most advanced in terms of  
 14 what we plan to try to do, and that is we plan to  
 15 initiate a bio, quote-unquote, remediation of the  
 16 brine itself. We're going to use bacteria to try  
 17 and break down the perchlorate so we can recycle  
 18 more of the brine and thereby cut down the total  
 19 brine waste that's generated.  
 20 Calgon has a proprietary process that  
 21 comes from another company and they have been  
 22 somewhat mute in terms of sharing a lot of  
 23 information on that. But it appears to be a very  
 24 similar process to what AeroJet is using. We're  
 25 hopeful that the bacteria will be capable of

8

1 knocking the large majority of the perchlorate out  
 2 of the brine stream and ultimately we end up with  
 3 just a very small percentage of brine and some  
 4 biomass accumulation that just gets overboarded and  
 5 that would be the end of it.  
 6 That's basically it. I'd be happy to  
 7 provide you the information. If you would all like  
 8 to see the copy of the proposal, et cetera, I'd be  
 9 happy to share that with you as well.  
 10 GEBERT: Okay. Yes, I'd like to see it.  
 11 BURIL: That's not a problem.  
 12 RIPPERDA: In terms of discharge to the Arroyo,  
 13 like we talked before, you don't need a permit  
 14 because it's pursuant to a CERCLA action.  
 15 BURIL: Right.  
 16 RIPPERDA: But I still want to talk to Alex.  
 17 And even though you don't get a permit from the  
 18 Regional Board, I wrote a letter that included a lot  
 19 of the discharge requirements --  
 20 BURIL: Sure.  
 21 RIPPERDA: -- that they would normally include  
 22 in a permit. So you can go ahead and just like plan  
 23 to do it. But you can take a look at this --  
 24 BURIL: Okay. Great.  
 25 RIPPERDA: -- and see if there's any problems in

9

1 there for you. Basically I just took -- I cut and  
 2 pasted out of similar permits.  
 3 BURIL: Total flow, pH, BOD. BOD we weren't  
 4 planning, but we can do that. Suspended solids is  
 5 not a problem. Oil and grease --  
 6 RIPPERDA: If there's things later like BOD that  
 7 just are not applicable --  
 8 BURIL: That BOD is a little questionable. It's  
 9 not enough of a concern to me to question doing it  
 10 only because we're going to be doing these tests  
 11 anyway. I don't see anything here that gives me a  
 12 heartburn right off the bat.  
 13 RIPPERDA: When you say you were going to sample  
 14 twice a day, was that for the full suite?  
 15 BURIL: No. That's actually only for the VOCs  
 16 that we have here on site and for the perchlorate.  
 17 So as far as what amount of sampling we  
 18 need to talk about in terms of this full suite of  
 19 things, when you say once per discharge, I guess I'd  
 20 ask what are you thinking of when we're talking  
 21 about a continuous discharge like that?  
 22 RIPPERDA: Yeah. I was thinking once at  
 23 start-up.  
 24 BURIL: Yes.  
 25 RIPPERDA: And then --

10

1 BURIL: A few times during the course of --  
 2 RIPPERDA: Right? And then maybe once a week or  
 3 if you've got nondetects or maybe the  
 4 semi-volatiles --  
 5 BURIL: Yes.  
 6 RIPPERDA: -- like, you know, do it one other  
 7 time like a week later if you still have  
 8 nondetects --  
 9 BURIL: Yes.  
 10 RIPPERDA: -- you don't sample it again. Then  
 11 you switch wells --  
 12 BURIL: I have no problem with --  
 13 RIPPERDA: -- you sample for that. And again at  
 14 start-up a week later, if you have nondetects then  
 15 you don't sample again since it's only a two-month  
 16 long test.  
 17 BURIL: I have no problem with that at all. Do  
 18 you, Pete?  
 19 ROBLES: No.  
 20 BURIL: I think that's a great idea.  
 21 RIPPERDA: And if you do have detects for any of  
 22 the semi-volatiles or any other constituents, that  
 23 might be another analysis type.  
 24 BURIL: Sure. We could increase frequency then  
 25 and understand what's going on. That makes sense.

11

1 Sure. That sounds fine. We'll just plan on it that  
 2 way, then.  
 3 RIPPERDA: So because I'm not that familiar --  
 4 well, because I'm not familiar at all with Regional  
 5 Board NPDES type permits and I just cut and pasted  
 6 what I got from the Board you might --  
 7 BURIL: We have a NPDES permit here.  
 8 RIPPERDA: Just look through that to make sure  
 9 that I didn't include anything that's onerous --  
 10 BURIL: Sure. That's great.  
 11 RIPPERDA: -- or irrelevant.  
 12 BURIL: No. Just looking, this looks like a  
 13 standard GCMS scan of --  
 14 CARLOS: Standard monitoring requirements in  
 15 NPDES terms. I'm working with Mark and also our  
 16 NPDES folks just to make sure that there's  
 17 nothing --  
 18 BURIL: Based on what I'm seeing here, I'm not  
 19 seeing anything that causes me a heartburn. We  
 20 already have an NPDES permit, as I probably  
 21 mentioned. When it comes right down to it, this  
 22 looks to be no different than what the requirements  
 23 that are in that. We've got the Lab contracts to  
 24 handle it and we have the funding available.  
 25 So once a week at start-up?

12

1 RIPPERDA: Yes.  
 2 BURIL: And then depending upon the nature of  
 3 the analyses, we either cut back or increase as  
 4 required.  
 5 RIPPERDA: Yeah.  
 6 BURIL: That sounds fine. We'll be in contact  
 7 with all of you to be sure that you know what the  
 8 analytical results are and we can make sure  
 9 everyone's in agreement as to what needs to happen  
 10 before we do it. Okay. Great.  
 11 RIPPERDA: I won't actually be issuing a letter  
 12 until another week and a half. I'm out of the  
 13 office all next week. So even though this is only a  
 14 draft, I'll issue a --  
 15 BURIL: A formal letter.  
 16 RIPPERDA: -- a final letter and it will be  
 17 in your hands --  
 18 BURIL: That will come probably just about in  
 19 time for us to be able to set up, so that will work  
 20 out.  
 21 RIPPERDA: You don't actually need the letter.  
 22 If for some reason it doesn't go out you can start  
 23 discharge, you know. It is pursuant to a CERCLA  
 24 action and you have the RPMs, like the three of us,  
 25 saying it's okay.

13

1 BURIL: Excellent. Excellent.  
 2 Well, that's the last hurdle on that  
 3 particular program. I thank you all for helping us  
 4 out on that one because now we've got just an  
 5 opportunity to come up with something that may be a  
 6 first maybe in California, maybe in the nation, when  
 7 we start talking about this as a remedial action for  
 8 a CERCLA site as opposed to wellhead treatment for a  
 9 municipal well. The opportunity there I think is  
 10 pretty good. Okay.  
 11 Let's go ahead and skip down to number 2.  
 12 Does anyone have any other questions before I leave  
 13 that?  
 14 RIPPERDA: Yes, I just have a question. If this  
 15 is such a promising looking method, how come like at  
 16 the Henderson meeting, you know, Calgon wasn't up  
 17 there saying "Hey, we've got it fixed" or "We're  
 18 close to having it fixed"?  
 19 BURIL: I wish I knew. I don't understand their  
 20 reluctance to really jump out there. Certainly  
 21 they've come to us --  
 22 RIPPERDA: Ion exchange is not like Greek  
 23 science. How come there's not a bunch of other  
 24 companies all --  
 25 BURIL: I almost wonder whether perchlorate is

14

1 being viewed as seriously by other entities as it is  
 2 by Calgon. I think Calgon is just kind of out in  
 3 the front of the pack on this one.  
 4 RIPPERDA: They just happened to get hired by  
 5 Aerojet or be like involved at some level and --  
 6 BURIL: They got involved with us. And I know  
 7 that they've been looking at the perchlorate issue  
 8 either as a result of the AeroJet work or other  
 9 things. I don't know that perchlorate has become as  
 10 strong an issue in other parts of the country as it  
 11 is right here in Southern California and Southern  
 12 Nevada. I think we're kind of a perchlorate hot  
 13 spot right now. Other companies may not view it as  
 14 much as a profit kind of thing as Calgon might.  
 15 Calgon is very well known around here. Out there in  
 16 the Arroyo we have our Calgon plant for the City of  
 17 Pasadena. I think they just saw this as an  
 18 additional opportunity and jumped on it. And we're  
 19 glad they did.  
 20 Any other questions?  
 21 RIPPERDA: One more question. What kind of like  
 22 operating costs does a plant like that have as far  
 23 as power requirements?  
 24 BURIL: That's part of what we're going to try  
 25 to understand. But the operating costs and so forth

15

1 are very much in the same line as a denitrification  
 2 plant. Exactly what that is in terms of dollars,  
 3 I'm not sure.  
 4 RIPPERDA: Uh-huh.  
 5 BURIL: But the costs are not at this stage any  
 6 more than any plant that uses ion exchange to  
 7 remove nitrogen or nitrates in the water. And  
 8 depending upon the resin or the regeneration --  
 9 RIPPERDA: Even though the treatment level is  
 10 down in the like low parts per billion range.  
 11 BURIL: Yes. That's actually the kind of thing  
 12 that we're trying to understand.  
 13 One of the things that maybe isn't real  
 14 clear about the ISEP system is it is actually the  
 15 system that they use for nitrate and nitrite removal  
 16 at various locations throughout the country. It's  
 17 exactly the same technology. It's just that it's  
 18 being applied to perchlorate now as opposed to  
 19 nitrate.  
 20 Because of that they aren't sure exactly  
 21 how everything will work in varying concentrations,  
 22 which is why Calgon is very enthused about coming  
 23 here to look at relatively high concentrations of  
 24 perchlorate as opposed to what they have in the San  
 25 Gabriel Valley, which is relatively low. They're

16

1 just kind of getting a spectrum of what's going on  
 2 as the perchlorate issue unfolds and may take an  
 3 interesting turn toward the fall time frame when we  
 4 get some of the results back from the -- what did we  
 5 call that thing at Henderson? Stakeholders meeting?  
 6 Was that what it was, Mark?  
 7 RIPPERDA: Yes.  
 8 ROBLES: Yes.  
 9 BURIL: Well, the work that Dan Rogers is doing,  
 10 basically, and the EPA folks are doing. When we get  
 11 some of that information back we may have a  
 12 different road to take, but certainly basically we  
 13 have started down some road. If we find something  
 14 that works, then so much the better for us. If we  
 15 don't need it, so much the better anyway.  
 16 RIPPERDA: But the preliminary indications from  
 17 Baldwin Park are that it's not economically  
 18 unfeasible (unintelligible) --  
 19 BURIL: Doesn't appear to be based on what  
 20 they're seeing thus far. In fact, without having  
 21 hard numbers, it's hard for me to speak directly to  
 22 it, but the technicians that are working on the site  
 23 are fairly enthused by what they're seeing. It's a  
 24 very easy system to operate. It doesn't require a  
 25 great deal of tinkering to maintain the effluent

17



1 quality, and that in itself is a big plus. As far  
2 as generation rates and things like that, they  
3 haven't calculated that out yet. Okay.

4 On to number 2, then. The extended soil  
5 vapor extraction test. Before we talk about that,  
6 I'd like to have Vitthal talk a little bit about the  
7 results we got from the first one and kind of give  
8 you a little update as to where we're at.

9 HOSANGADI: Some of these results you already  
10 have from our previous telephone call. I will just  
11 run through the initial ones real quick.

12 The first sheet basically shows the flow  
13 rates that we achieved for Test 1 and Test 2. As  
14 you can see, the flow rates were anywhere between  
15 150 and about 270 cfm for Screen A, and then the  
16 higher one was when we applied a vacuum to all three  
17 screens. For each particular week, or rather for  
18 each particular set of results, the first flow rate  
19 is 100 percent vacuum, then we have the 75, the 50  
20 and the 25.

21 The second graph on that page shows the  
22 flow rates when we did the second test. The red is  
23 for the first part of that test where we actually  
24 applied a vacuum to all three screens. And then the  
25 blue is when we applied a vacuum to only Screens B

18

1 and C, and that will optimize the removal.

2 Going to the second sheet, it shows the  
3 vacuum with the flow rate. The relationships are as  
4 we would expect. Nothing new there as such.

5 Sheet 3 shows the concentrations, the flow  
6 rates and the removal rates. And again, as we have  
7 discussed the last time around, if you look at the  
8 average concentrations across the four days, the  
9 concentrations are almost the same. So in other  
10 words, when we reduce the vacuum by 75 percent and  
11 the flow rate dropped as a result, the total removal  
12 rate dropped by the same amount as the flow rate  
13 dropped. And we saw pretty much the same effect in  
14 all the four configurations where we tested A, B and  
15 C and A, B, C all together, the concentrations were  
16 pretty much the same across the board when we  
17 reduced the vacuums.

18 The next sheet shows the VOC removal rates  
19 for Test 1 and Test 2. Some of this information is  
20 actually from the previous sheet. Again, you can  
21 see the removal rate basically drops pretty much  
22 with the same rate as the flow rate. The removal  
23 rates ranged anywhere from around .04 pounds per  
24 hour to as much as .15 pounds per hour in Test 1.  
25 And then during Test 2 they were right around

19

1 .1 pounds per hour, which translates to about 2.5  
2 pounds per day on a continuous basis. That's just  
3 for the carbon tetrachloride and some of the Freon  
4 and possibly some other low levels of VOCs. So  
5 right around 2 1/2 pounds per day you can expect on  
6 the next phase of the test.

7 The next sheet shows just the VOCs removed  
8 for Tests 1 and 2. We pulled out right around a  
9 little more than -- somewhere between 10 and 11  
10 pounds for all of Test 1. And then Test 2 we pulled  
11 out around 72 pounds, the carbon tet plus the Freon.

12 BURIL: So you pulled 72 pounds cumulatively  
13 over the course of a little less than a month.

14 HOSANGADI: Yeah, for Test 2. Then when you  
15 look at both tests around 80, 83, 84.

16 Again, this is based really on the  
17 concentrations coming in. There might have been  
18 periods of time when the concentrations were much  
19 higher and we didn't really have a sample at that  
20 time. Because based on the analysis of the carbon  
21 samples of the exhausted carbon from the first set  
22 that we exhausted, we have pretty high levels of  
23 trichloroethene, whereas we don't really see much of  
24 trichloroethene in the samples that we collected.  
25 We were collecting them in a period, you know, maybe

20

1 every 8 hours or 12 hours. So we feel that there  
2 might have been a spike when we were not collecting  
3 the sample. When we went through lab results we  
4 didn't really pick TCE up, but it did exhaust the  
5 carbon. It exhausted the carbon at a rate higher  
6 than would have been predicted by just carbon tet.  
7 So both those factors combined appears to be that  
8 even though we are presenting 82 pounds, the total  
9 removal might have been significantly higher.

10 BURIL: It could have been more.

11 HOSANGADI: The next sheet, that just shows the  
12 baseline sampling at the vapor extraction well. The  
13 first one on April 9th is before we started the  
14 tests. We actually started the tests on the 13th  
15 and then we collected the sample at the end of each  
16 week. So, for example, the sample on 4/17/98 is  
17 when we applied a vacuum on Screen A. And you can  
18 see that Screen A actually did drop significantly,  
19 but, you know, screen B and C were pretty much the  
20 same.

21 Then we ran Screen B. And there, you  
22 know, the Screen B concentrations didn't really  
23 drop. As a matter of fact, they show a slight  
24 increase, and so did Screen A and C. Then when we  
25 ran Screen C again we saw a drop in all of the

21

1 concentrations. The reading on 5/8/98 is actually  
 2 the -- just after we finished the fourth week of  
 3 Test 1 and then we started the long-term test. And  
 4 then June 9th, toward the end of the test we  
 5 actually saw no concentrations in the vapor  
 6 extraction well. But when we came back a week later  
 7 the concentrations had gone back up again.  
 8 GEBERT: So that's the rebound?  
 9 HOSANGADI: That's kind of the rebound. That  
 10 was right around the time when we decided we would  
 11 actually extend test further, so we just did two  
 12 rounds of the rebound. The actual rebounds will be  
 13 done at the end of the next phase of Test 2. But as  
 14 you can see, the concentrations in the last two  
 15 rebounds were pretty much the same. So kind of the  
 16 rebound concentration, if you will  
 17 The next page is the normal vacuum  
 18 responses from Test 1. They show the response from  
 19 Zone A, B and C. As you can see, the .01 normalized  
 20 responses are around 160 feet, which mathematically  
 21 would be defined as the radius of influence.  
 22 The next page on is where the interesting  
 23 results actually show up. These are the vacuum  
 24 responses when we started doing Test 2 and this was  
 25 roughly the time when we decided to actually monitor

22

1 wells that were further away than the wells that we  
 2 had originally planned. In fact, that was right  
 3 around the time of the last RPM meeting. In fact, I  
 4 think Steve had a chance to look at the response on  
 5 Well 27, which were showing pretty high responses.  
 6 That's when we decided to step out further.  
 7 The rest of these graphs basically show  
 8 the responses of some of the wells at different  
 9 distances from the extraction well. The first one  
 10 is Well 25, Zone A and B. The well is about 53.8  
 11 feet away from VE-1 so obviously there is a good  
 12 response.  
 13 I'd like to draw your attention on this  
 14 graph in particular to May 27th. You can see that  
 15 distinct drop. That was when we had to shut the  
 16 test down for about a period of 24 hours and try to  
 17 see which wells actually demonstrated that same  
 18 drop. We figured that that would be another way of  
 19 looking at which wells really were showing the  
 20 response, because we were seeing responses in wells  
 21 that were pretty far away.  
 22 Now, on this graph you'll notice that  
 23 after we started the thing back on, which was on the  
 24 28th, Zone A doesn't show that high a response.  
 25 That was because we had shut down Zone A at that

23

1 time. So only Zone B and C were operating after the  
 2 28th. And that's pretty obvious on that same sheet  
 3 when you look at the vacuum responses in Zone B.  
 4 After we started it up on the 28th, you can see that  
 5 all the responses went right back up pretty much to  
 6 the same level that we were -- that they were before  
 7 we shut the test down. And then again, you can see  
 8 on June 9th when we shut the test down, all of the  
 9 vacuum responses dropped right down.  
 10 Now, this is important, because as you go  
 11 through the response in the other wells you'll  
 12 notice that this effect was shown on wells that were  
 13 a significant distance away, in fact, as far as for  
 14 700 feet away.  
 15 When you go to Well Number 27, which is  
 16 216 feet away from B-1, if you look at Zone A, just  
 17 look at May 27 you will see that they all dropped  
 18 down and then they kind of went back up. Again,  
 19 like I mentioned earlier, at that point onwards the  
 20 A well was not being subject to the vacuum. So Zone  
 21 A did not go all the way back up to the levels that  
 22 they were before they dropped down.  
 23 But if you just go down on that same page,  
 24 if you look at Zone B and Zone C, they all dropped  
 25 down on May 27th, and they all went right back up

24

1 to about the same level as they were before we shut  
 2 it down. Then, again, when you look at June 9th,  
 3 they all dropped back down. The same goes for Zone  
 4 C. Now, this is 216 feet away. If you remember on  
 5 Test 1, we showed that the response was at least 160  
 6 feet away.  
 7 At 538.7 feet away for Well 37, again,  
 8 when you look at Zone A it looks a little bit  
 9 questionable, maybe because of the fact that we shut  
 10 Zone A down at that point. But then when you look  
 11 at Zones B and C you'll notice that the responses  
 12 did, indeed, go right back up both for Zone B and  
 13 for Zone C.  
 14 When you look at the last sheet, which is  
 15 771 feet away, again when you look at Zone A the  
 16 responses didn't really go back up the same way.  
 17 They were, in fact, going up and down, so Zone A may  
 18 not have been impacted. In any case, we were not  
 19 really applying a vacuum on Zone A. But when you  
 20 look at Zone B and Zone C, sure enough, on May 27th  
 21 the responses go all the way down and then they pick  
 22 right back up, and then when we shut the system down  
 23 on the 9th all of them went right back down.  
 24 BURIL: Amazing. I don't know how many folks  
 25 have been in vacuum extraction work in other

25

1 locations. I personally have done it for a number  
 2 of years in the petroleum industry, and I was  
 3 thrilled when I got 150 feet of radius.  
 4 HOSANGADI: Exactly.  
 5 BURIL: 700 feet, this is fantasy time. This is  
 6 just unbelievable. But the data don't lie. They  
 7 are showing us a fairly decent response that far  
 8 away, which is why we question it so strongly, and  
 9 strongly enough to extend the test as we've already  
 10 discussed and agreed to. If, indeed, we find out  
 11 that in the extended test we do have this kind of  
 12 radius of influence, vapor extraction becomes a  
 13 very, very easily implementable kind of remedial  
 14 action, something which I would recommend to NASA  
 15 that we implement immediately.  
 16 I have my serious doubts that we'll see  
 17 this continue as the water table drops and other  
 18 conditions, what I'll term, normalize. We have  
 19 seen -- Mark, correct me, if it wasn't a historic  
 20 high water table, it was getting close. Am I  
 21 correct?  
 22 CUTLER: Yes.  
 23 BURIL: So the chances of it being the same are  
 24 fairly small, in my opinion. It's because of that  
 25 that we don't want to base a design on what it is

26

1 that we're seeing now, because theoretically we  
 2 could probably put three wells on the site and clean  
 3 the entire site, and that doesn't really make a  
 4 whole lot of sense, not for 176 acres.  
 5 HOSANGADI: And basically what the next phase of  
 6 the test will allow us to do is, you know, duplicate  
 7 the effect of when we shut the thing down for about  
 8 30 hours back on May 27th. We'd like to have the  
 9 ability to keep pulling for maybe three or four  
 10 weeks and turn it on for a full week and then see  
 11 what -- the responses are at the different wells to  
 12 make sure that what we're seeing is really true.  
 13 BURIL: Where we're at right now with the  
 14 extended pilot is I've gotten everything from Foster  
 15 Wheeler that I need now to be able to implement  
 16 that. And we have the contractual vehicles to set  
 17 it all in motion in the ponderous wheels of JPL.  
 18 They are going to grind out probably about this time  
 19 next week, which will give them the official  
 20 go-ahead.  
 21 Basically I think we're looking at what,  
 22 Vitthal? How much time between the time that we  
 23 have a finished-off CWO to what we're bringing here  
 24 on site?  
 25 HOSANGADI: They typically have been about 13

27

1 weeks from the date of the CWO. That has some  
 2 amount of play in it if need be.  
 3 BURIL: So we're talking actually having  
 4 something up and running probably in the middle to  
 5 late October time frame. Is that correct?  
 6 HOSANGADI: Correct. And basically we've kind  
 7 of gone through the vendor pre-selection, and so on  
 8 so forth. So, you know, the vendor is already aware  
 9 that you need to get going. So that length is cut  
 10 down a week I bet.  
 11 BURIL: Well, anything that we can do to speed  
 12 that process once you have the contractual vehicle  
 13 in your hands would be a good thing, in my mind.  
 14 Because I am very, very interested to see what we  
 15 get from this. And even if 150, 200 feet turns out  
 16 to be the, quote-unquote, design criteria that we  
 17 establish, even that is pretty doggone good and it  
 18 would still indicate that vapor remediation, based  
 19 on the amount of removal that we're seeing, is  
 20 essentially a very viable means of remediating the  
 21 soil vapor VOC.  
 22 GEBERT: No argument about that. So you would  
 23 run basically the same tests?  
 24 HOSANGADI: Essentially the same thing.  
 25 GEBERT: Do Test 2 again with presumably lower

28

1 water table?  
 2 HOSANGADI: Right. And also there are some  
 3 minor differences in terms of the equipment. You  
 4 know, for the first phase we ended up getting two  
 5 systems with the permit limitations. And it then  
 6 turned out that the second system that they ended up  
 7 providing was actually capable of pulling only 100  
 8 cfm. So we pulled only about 300 cfm. And the  
 9 design system would be able to pull about 350 cfm by  
 10 itself at the maximum vacuum. So if the vacuums  
 11 were lower, as they will be, you will be able to  
 12 pull maybe 400 to 450 cfm if need be.  
 13 BURIL: Vitthal, answer a question for me, if  
 14 you would.  
 15 HOSANGADI: Yes.  
 16 BURIL: What is the principal driver in terms of  
 17 schedule when we're talking in the 12-, 13-week time  
 18 frame?  
 19 HOSANGADI: Two things primarily. The equipment  
 20 itself and the AQMD permit format. Now, we've got  
 21 all the information ready for the permit, so the  
 22 minute we get the go ahead I'll try and get it to  
 23 you literally the next couple of days after that.  
 24 BURIL: Okay. Let me ask a question of the  
 25 regulatory folks, then. Given the same kind of

29

1 approach that we have with the discharge, are we in  
 2 need of getting this permit? I'm looking for ways  
 3 to cut down time, basically.  
 4 RIPPERDA: You don't need a permit, because it's  
 5 a CERCLA action. Even though, you know, it's the  
 6 air board, and that's like not the water board.  
 7 It's none of us in this room.  
 8 BURIL: Right.  
 9 RIPPERDA: You add -- you legally don't need the  
 10 permit.  
 11 CARLOS: Even for the air board.  
 12 RIPPERDA: Yeah, even for the air board. It's  
 13 like you do not need a permit, period. Although 12  
 14 weeks isn't that long and sometimes it's just  
 15 easier --  
 16 BURIL: Yeah, that's true.  
 17 RIPPERDA: -- to get the permit and not get  
 18 people arguing with you --  
 19 BURIL: Fighting with us.  
 20 RIPPERDA: -- fighting with you. So 12 weeks  
 21 doesn't seem like that big a delay when the stuff's  
 22 been there for decades. It's like, yeah, I work for  
 23 EPA and EPA says you don't need the permit and I  
 24 want to like show that I'm right.  
 25 BURIL: Yeah. That's --

30

1 RIPPERDA: But 12 weeks is not that bad.  
 2 BURIL: Okay. If for some reason we run into a  
 3 snag with the AQMD for whatever reason, we may call  
 4 upon you folks to support us in dealing with that.  
 5 But I think in the interest of continuing good  
 6 relations amongst all agencies and amongst ourselves  
 7 I think we'll probably just pursue the permit as  
 8 though it were required and go from there.  
 9 RIPPERDA: Yeah. If you have some kind of  
 10 problem that makes you want to get out there  
 11 immediately or much sooner or they have delays, we  
 12 can go ahead and just do it.  
 13 BURIL: Okay.  
 14 RIPPERDA: And you can have the air board argue  
 15 with me.  
 16 BURIL: Hopefully, we won't go to that.  
 17 Okay. That sounds fine.  
 18 RIPPERDA: What do you do with the carbon  
 19 that --  
 20 HOSANGADI: Basically it would be profiled and  
 21 then sent to Parker, Arizona to the U.S. Filter  
 22 Weststates for recycling.  
 23 RIPPERDA: Uh-huh. Do they regenerate it or --  
 24 HOSANGADI: That's where the carbon from the  
 25 previous testing will be going.

31

1 BURIL: That's Weststates' principal  
 2 regeneration facilities.  
 3 Is it Calgon that has the one up in  
 4 Washington that was shut down?  
 5 HOSANGADI: No. That was Cameron, Yakima.  
 6 BURIL: Okay. Yeah, that one turned out to be  
 7 bad news, as I recall.  
 8 HOSANGADI: Exactly.  
 9 BURIL: Any other questions on the extended  
 10 vapor extraction test that anyone has that we can  
 11 try to answer?  
 12 ROBLES: Richard was kind of smiling when you  
 13 said three wells. How many wells is it going to  
 14 take? Give me a scientific well estimate.  
 15 BURIL: More than one and less than a hundred.  
 16 HOSANGADI: It kind of depends on what area  
 17 you're trying to vacuum. Typically, if you were to  
 18 take the area and then -- divide by the area of  
 19 influence of one well, which is roughly the area of  
 20 the circle, then that would be the minimum number of  
 21 wells.  
 22 RIPPERDA: So what's your area of contamination  
 23 and what's your current guess at your working radius  
 24 of influence?  
 25 BURIL: Well, if you were to take the data --

32

1 RIPPERDA: Above 150, 200 hundred acres of --  
 2 BURIL: We got basically 200 acres of area that  
 3 we're talking about, though that's not indicating we  
 4 have the whole 200 acres as an area for remediation.  
 5 But for the most conservative estimate, just to talk  
 6 in round numbers, we didn't believe the data to the  
 7 extent that it tells us. If we were just to say  
 8 some 500 feet, I mean, divide that by 60 percent or  
 9 by a third, so we're somewhere 500 feet of  
 10 influence. Just trying to do the math in my head, I  
 11 don't know if that's going to work very well,  
 12 but --  
 13 RIPPERDA: I have a quick question about the  
 14 radius.  
 15 BURIL: -- we're probably talking no more than  
 16 about six or seven wells at the very most.  
 17 RIPPERDA: I have a quick question about the  
 18 radius of influence. Like out at 700 feet you're  
 19 pulling less than inch of water. How much flow rate  
 20 is that? What's the actual mass of air that's being  
 21 moved at your radius of influence of 700 feet?  
 22 HOSANGADI: That would need some calculations.  
 23 RIPPERDA: Like just because you can measure  
 24 with a sensitive transducer a half inch of water,  
 25 that doesn't mean that you're getting sufficient

33

1 flow rates out that far.  
 2 HOSANGADI: Right.  
 3 BURIL: That's part of the issue. That's part  
 4 of the thing that we want to try to understand by  
 5 going through a more detailed, longer-term test.  
 6 RIPPERDA: Uh-huh.  
 7 BURIL: If we were to make a very conservative  
 8 assumption we could cut this back by a great deal.  
 9 I personally, in my experience in vacuum  
 10 extraction, have never seen anything like this and  
 11 the mechanism behind it is still something of a  
 12 little bit of a mystery to us. The only thing that  
 13 strikes me and that makes sense to me is that the  
 14 water table is so high. I think we can all  
 15 understand the mechanics of that.  
 16 As far as the actual flow rates out there,  
 17 like you said, it's going to need to be calculated  
 18 if we wanted to do that. But the fact that we would  
 19 have -- you know, even cut it back to some degree,  
 20 we're still talking about radiuses of influence that  
 21 are three and four times what I would expect to see  
 22 in some of the best instances.  
 23 HOSANGADI: The best I've ever seen was about  
 24 140.  
 25 BURIL: Yes.

34

1 HOSANGADI: That was in ideal -- almost ideal  
 2 conditions in Albuquerque.  
 3 BURIL: I saw in a beach sand a radius of about  
 4 160. That was ideal. Worked out very well.  
 5 RIPPERDA: So this means you have a high  
 6 permeability layer with some kind of confining unit  
 7 over it so you don't have air just coming in from  
 8 above.  
 9 BURIL: That appears to be at least part of it.  
 10 Also, we have a confining mechanism of the water  
 11 table.  
 12 RIPPERDA: So you have a somewhat narrow strip  
 13 of --  
 14 BURIL: We have a narrow strip of stuff that  
 15 you're drawing from, which is making it reach way  
 16 out, is my theory. As this confining layer is  
 17 removed --  
 18 RIPPERDA: You have a higher volume of air.  
 19 BURIL: -- you have a higher volume of air that  
 20 will then begin to suck this in. And trying to  
 21 understand what that volume should be for an,  
 22 quote-unquote, ideal application for a remedial  
 23 system is what we're trying to determine. If we  
 24 were to base this on a 500-foot radius of influence  
 25 I would bet that we aren't talking more than four or

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1 five wells.  
 2 HOSANGADI: It's about 18 acres per well.  
 3 BURIL: Yeah. So I mean, we're talking, you  
 4 know, a fairly minimal system. However, based on my  
 5 own experience and that of consultants that I have,  
 6 that just doesn't make sense, unless we have an  
 7 exceptional site here.  
 8 GEBERT: Based on what I have seen in a site  
 9 this size, as a ballpark guess, to answer your  
 10 question, Peter, somewhere between five and ten,  
 11 left field, somewhere in there.  
 12 BURIL: Ten would be an easy number to use. I  
 13 would say that would be one that would be reasonably  
 14 accurate. If we were to base everything on this one  
 15 we could be at half that. If we took the data to  
 16 the extreme we could be at a third of that. And  
 17 designing a system that's based on what I term an  
 18 anomalous condition of high water table, it's just  
 19 not good engineering judgement.  
 20 HOSANGADI: And also the other thing, you know,  
 21 depending on the timing, we might be able to also  
 22 look at some of the soil vapor monitoring that goes  
 23 on. Now we have the real effect of SVE on a  
 24 particular location away from the extraction well.  
 25 So hopefully that will, you know, allow some

36

1 additional information.  
 2 BURIL: That's a great segue.  
 3 B.G., why don't you talk to us a little  
 4 about what you've had show up in the soil vapor gas  
 5 tests that you've done. We've completed both rounds  
 6 of the latest soil vapor and we have some results  
 7 here we want to show you.  
 8 RANDOLPH: Basically what we've got here is  
 9 relatively self-explanatory. We have finished the  
 10 two rounds. I've included the same sketch map that  
 11 appeared in the work plan and FSAP addenda just  
 12 for your information to help briefly look at these  
 13 tables and present the data and kind of get an idea  
 14 of the location real quickly.  
 15 What I've got here on the first of the  
 16 three pages is the first two rounds of, or the two  
 17 rounds that we did on the first four deep-soil vapor  
 18 wells a year ago this last spring, and it contains  
 19 all of the contaminants that were -- I shouldn't say  
 20 contaminants -- concentrations of the various  
 21 chemicals that we've picked up for all of the new  
 22 wells as well. They're listed on the second two  
 23 pages. Wells 32 through 39 are the new wells and 25  
 24 to 28 were the first four.  
 25 This kind of gives you a comparison of

37

1 what we got at that time versus the first two rounds  
 2 that we have here this year. You're going to have  
 3 to remember that the sampling event are 11 months  
 4 apart. So there are some differences and  
 5 disparities and changes. To kind of help represent  
 6 and give you a better summary, the third page,  
 7 moving from the bottom of the pile --  
 8 BURIL: The one by itself.  
 9 RANDOLPH: Yeah. I just listed the four major  
 10 VOCs where we got the most consistent hits and  
 11 compared those with the first two rounds that we did  
 12 in '97 versus the only round that we did here this  
 13 spring, which would have been in May. It kind of  
 14 gives you an idea of all three events, sampling  
 15 events, that we have here.  
 16 And you have to remember, too, that this  
 17 sampling event that we did here on Wells 25 through  
 18 28 in May of this year was during the soil vapor  
 19 pilot test, extraction pilot test.  
 20 Of course, you might note, too, we did get  
 21 some surprises in the nine new holes that we did put  
 22 in. After we did set the bottom sampling tip  
 23 several feet above the ground water table, we had  
 24 five of them that were flooded. The groundwater  
 25 table was still rising and we're hoping that maybe

38

1 in a couple of months we can go maybe blow those  
 2 with some nitrogen and see if we can't get them  
 3 clear after the water table drops.  
 4 BURIL: So overall, B.G., we're looking at  
 5 results, then, for new holes that don't show us  
 6 anything in terms of any extra surprises per se in  
 7 terms of soil vapor concentrations.  
 8 RANDOLPH: No.  
 9 BURIL: If you were to characterize the vapor  
 10 plume on the site in terms of its extent, how would  
 11 you do that based on this data?  
 12 RANDOLPH: I think --  
 13 BURIL: Is it bigger than what we've done? Less  
 14 than what we've done? Concentrated in one specific  
 15 area?  
 16 RANDOLPH: I think primarily it's in the area  
 17 where we have the soil vapor pilot extraction test,  
 18 we're right in the heart of it.  
 19 GEBERT: Which is where, B.G.? Is that the  
 20 triang -- or the square there?  
 21 BURIL: The square.  
 22 GEBERT: That's the square there?  
 23 RANDOLPH: Yes. That square is actually located  
 24 on Aero Road. That's where we thought we were going  
 25 to have to put it to begin with. Actually, we were

39

1 able to get down into the parking lot. We didn't  
 2 know if we were going to be able to.  
 3 BURIL: The difference is about what? 30, 40  
 4 feet difference?  
 5 RANDOLPH: Oh, probably 20 to 22 feet.  
 6 BURIL: So essentially the same location?  
 7 RANDOLPH: Yes. Right. I still think that's  
 8 pretty much the heart of it. I think that up to the  
 9 northwest it extends probably up to 33 and a little  
 10 bit beyond. I'm not sure about extending as far  
 11 west as 36 and 38, even though we do seem to pick up  
 12 what I may refer to as background level of carbon  
 13 tet and some other information. VOCs that we picked  
 14 up in the soil vapor probes that we had back in '94,  
 15 early '94, they're very low. This seems to be a  
 16 continuing or pretty general condition throughout  
 17 the Lab itself that we've been able to find so far.  
 18 And 39 seems to be having that particular  
 19 background level. But yet, get up around 35, 34 and  
 20 start squeezing back up into the heart of the Lab,  
 21 the concentrations are much more elevated and they  
 22 probably extend farther to the southeast.  
 23 BURIL: Okay. I think we'll need to all do a  
 24 little more evaluation on the data. But it just  
 25 takes time. I agree with what B.G. said just based

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1 on the little bit of time I've had to look at this.  
 2 For all intents and purposes, and again  
 3 we'll need to do more evaluation, but for all  
 4 intents and purposes, I think for determining the  
 5 area that would require remediation, I think we may  
 6 have it. And at its largest and its most  
 7 conservative I would say we're talking to the line  
 8 of -- north/south line around Well 38 to the west  
 9 and somewhere around the property boundary to the  
 10 east, to the fault on the north and about the  
 11 east/west line drawn through Well 39 on the south.  
 12 Is that about the extent you were thinking  
 13 of, B.G.? It sounds like that's where you --  
 14 RANDOLPH: Pretty much, yes.  
 15 BURIL: So from that standpoint, the  
 16 characterization of knowing where to place remedial  
 17 efforts, I think we're just about there, if we  
 18 aren't there already.  
 19 RIPPERDA: I just have some kind of background  
 20 questions about I think what you just said.  
 21 When you're talking about, you know, kind  
 22 of like background, I guess, so now I'm going to ask  
 23 about background. You know, that 38, 39, those  
 24 wells kind of out towards the edge represent  
 25 somewhat background condition of carbon tet at the

41

1 Lab.

2 Does that mean that carbon tet was kind of  
3 sporadically used all through the area and released,  
4 or does that mean that it was released at, you know,  
5 some kind of more centralized source and it's just  
6 kind of the migration of soil gas throughout the  
7 subsurface?

8 RANDOLPH: The ground around 38 and 39, that  
9 part of the Lab was not even developed yet at the  
10 time of general use of carbon tet at the Lab.

11 RIPPERDA: Uh-huh.

12 RANDOLPH: So I believe primarily to the north  
13 and the northeastern portions of the Lab, the older  
14 portions of the Lab, are the primary source for it  
15 and just over the course of the years, pumping of  
16 the groundwater and barometric pressure changes and  
17 everything else it has migrated.

18 BURIL: By pumping of the groundwater, B.G., you  
19 mean the raising and lowering of the water level?

20 RANDOLPH: Yeah.

21 RIPPERDA: So it's not that you have small  
22 scattered sources throughout the area, it's that  
23 you've got more of a centralized source and it's  
24 being carried with the groundwater and offgassing  
25 from the groundwater and just migrating through the

42

1 vadose zone itself?

2 RANDOLPH: I think so.

3 RIPPERDA: Okay.

4 RANDOLPH: But I think it probably originated  
5 from many sources that are located in that --

6 RIPPERDA: That are more in a centralized grid.

7 RANDOLPH: Yes. Right.

8 RIPPERDA: Okay. So as far as then scoping the  
9 areal extent of your remediation, I would agree you  
10 don't have to like try and pump wherever you have  
11 any soil gas. You need to pump where the sources  
12 are.

13 BURIL: Yes.

14 GEBERT: Does it look like it's all one plume to  
15 you, B.G.?

16 RANDOLPH: Pardon?

17 GEBERT: Does it look like it's all one plume,  
18 or does one chemical have one type of an area of a  
19 plume and then another one will have another one?  
20 Have you been able to --

21 RANDOLPH: You know, I can't really answer that.  
22 But trying to look at the first two rounds and just  
23 grouping the major VOCs that you do see, it seems to  
24 me like there could be a couple of places where  
25 there have been a different source. But I think

43

1 it's basically the same plume, but maybe the  
2 concentrations within that particular plume are  
3 higher in some areas than they are others.

4 BURIL: In fact, Richard, I think one of the  
5 things that struck us about wanting to expand this  
6 soil vapor effort was the distinction that we saw  
7 between the groundwater concentrations, particularly  
8 at MW-7 and MW-16. At MW-7 we saw fairly high  
9 carbon tet, moderate TCE, where the opposite was  
10 true at MW-16, where we saw fairly high TCE and  
11 moderate carbon tet.

12 So that kind of distribution made us  
13 wonder about that and that's why we expanded to the  
14 west to understand whether there was something else  
15 out there. It seems like there may have been  
16 different uses across different areas, but it still  
17 was focused up in that northern, northeastern  
18 portion of the Lab. As B.G. described, it kind of  
19 spread out over time with groundwater offgassing and  
20 pumping of the groundwater table and whatever else  
21 that might be a contributing mechanism.

22 RIPPERDA: As far as the sources, I think you  
23 kind of talked about this at the last meeting I was  
24 at, but I kind of forget some of these details.

25 Would the seepage pits that are kind of

44

1 described in the original like investigation of the  
2 site, would those be primary sources, or was it  
3 people just throwing chemicals out their back door  
4 of whatever Lab they were in? What's kind of the  
5 primary entrance to the --

6 BURIL: We think it's been the dry wells and  
7 seepage pits that were constructed here, because  
8 most of what we've seen as far as the operations go  
9 for the Lab gives us indication that people just  
10 dumped the materials that they were working with  
11 into the drains that were in the buildings at the  
12 time, or down the floor drains and so forth. Based  
13 on B.G.'s work, most of those were associated with  
14 seepage pits or dry wells or something that would  
15 take the material and basically treat it like a  
16 sanitary waste.

17 RIPPERDA: Like drains in the building were  
18 plumbed to a dry well or seepage pits.

19 BURIL: Right.

20 RIPPERDA: Were those like cesspools that were  
21 also co-plumbed with toilets and stuff?

22 BURIL: Yes.

23 RANDOLPH: Some were and some were not.

24 RIPPERDA: So a lot of them were cesspools and  
25 some of them were just dry wells for drains?

45

1 BURIL: Yes. We did locate a couple of places,  
 2 actually three, if you look on the map, WP-1, WP-2  
 3 and WP-3, where --  
 4 RIPPERDA: Where are those?  
 5 BURIL: WP-1 and 2 are along the eastern  
 6 boundary of the site.  
 7 RIPPERDA: Okay.  
 8 BURIL: WP-3 is up toward the upper left-hand  
 9 corner. We did find some anecdotal information that  
 10 led us to believe that those may have been something  
 11 other than the cesspool kind of introduction into  
 12 the environment. We specifically targeted those  
 13 areas with the wells and so forth that we've got.  
 14 And correct me if I'm wrong, B.G., you didn't find a  
 15 whole heck of a lot.  
 16 RANDOLPH: No, we didn't.  
 17 RIPPERDA: So those are actual -- WP stands for  
 18 waste pit?  
 19 BURIL: Yes.  
 20 RIPPERDA: But it could also be a cesspool or  
 21 something?  
 22 RANDOLPH: No. These were areas where we --  
 23 that were described basically as an excavation or  
 24 had been an excavation of some kind.  
 25 RIPPERDA: Uh-huh. So it wasn't where building

46

1 drains were plumbed to these?  
 2 BURIL: No.  
 3 RIPPERDA: These were pits --  
 4 BURIL: Right.  
 5 RIPPERDA: -- that possibly got just refuse  
 6 or --  
 7 BURIL: Could have been anything. We don't  
 8 know.  
 9 RIPPERDA: But as far as the source of the  
 10 groundwater, those were most likely dry wells and  
 11 some kind of --  
 12 BURIL: Yes.  
 13 RIPPERDA: -- plumbing-associated stuff that's  
 14 more around MW -- the square kind of in between  
 15 MW-16 and MW-7.  
 16 BURIL: Yeah. We've actually nicknamed the  
 17 square in the past, if you look at MW-16, 13, 7, and  
 18 I'm looking for 8 on this. MW-8, which is behind  
 19 Building 303, isn't it, B.G.?  
 20 RANDOLPH: Yes, it is.  
 21 BURIL: We termed that the, quote-unquote,  
 22 quadrilateral. That appeared to be the zone of  
 23 highest concentration. It's right in that area of  
 24 the quadrilateral.  
 25 RIPPERDA: So is it the investigation -- again,

47

1 you probably talked about this at last meetings and  
 2 I don't --  
 3 BURIL: Sure. That's all right. Go ahead.  
 4 RIPPERDA: I get the waste pits confused with  
 5 cesspools and dry wells.  
 6 BURIL: We kind of merge them together.  
 7 RIPPERDA: Did you go into those cesspools or  
 8 dry wells and take soil samples underneath and --  
 9 BURIL: Where we could -- actually, most of  
 10 these things have been abandoned for many years.  
 11 RIPPERDA: Uh-huh.  
 12 BURIL: And a lot of the buildings have been  
 13 demolished. Some of these things have been taken  
 14 out; where we could actually locate these things we  
 15 did. Or if we couldn't get right on top of them we  
 16 got as close to them as we possibly could.  
 17 The way that we understood that these  
 18 things were built were to some fairly exacting  
 19 specifications in terms of the construction  
 20 materials and the manner in which they were  
 21 constructed and so forth.  
 22 RIPPERDA: Not just an ad hoc cesspool.  
 23 BURIL: No, not at all. Some of the earlier  
 24 ones may have been, but during the time that the  
 25 Army was here we have specifications that give

48

1 fairly detailed instructions on how to build these  
 2 things.  
 3 RIPPERDA: It's like the Army being the Army  
 4 says "This is how thou shalt build a cesspool."  
 5 BURIL: Yes. In fact, B.G., did an incredible  
 6 job of locating these things, because in a number of  
 7 locations we actually hit brick that appeared to be  
 8 the liner of the pits themselves. So we feel very  
 9 confident that if we didn't hit right on, we were  
 10 awfully darn close in every single location.  
 11 RIPPERDA: Uh-huh. But those aren't -- like I  
 12 know TCE (unintelligible) are pretty mobile.  
 13 BURIL: Yes.  
 14 RIPPERDA: But it's like those aren't an ongoing  
 15 source. They haven't been abandoned and silted up  
 16 and they still have --  
 17 BURIL: No, no. All the plumbing has been  
 18 abandoned to all of these back in the '60s, early  
 19 '60s time frame. As an example, we found one that  
 20 was down by Building 190, which is down here in this  
 21 part of the Lab. We were repaving a road right  
 22 behind Building 190 and along the side it. And  
 23 someone said "Hey, what's that funny little circle  
 24 sitting there?" when they found a brick circle.  
 25 Fortunately, the facilities folks here are

49



1 cognizant enough of those kind of things that they  
 2 contacted my office right away. I went down, I  
 3 looked at it and we dug down and we found a series  
 4 of holding tanks which were basically septic tanks  
 5 that then had a drain that went into two seepage  
 6 pits, which were basically built exactly to the same  
 7 specifications as the other ones.  
 8 We even got some of the brick sitting up  
 9 in one of our buildings as a demonstration. It's a  
 10 very nicely curved brick. Given its radius, it  
 11 would make a nice circle. We sampled the material  
 12 that was in the pits. We sampled the soils that  
 13 were near the seepage pit themselves. We also have  
 14 Well MW-10, although it's not shown on this  
 15 particular map. Well MW-10 is right there, within  
 16 about 20 feet of that excavation.  
 17 RIPPERDA: Down at Building 190?  
 18 BURIL: Down at Building 190.  
 19 RIPPERDA: That's outside of your -- that's like  
 20 you say, it's clean --  
 21 BURIL: I was happy to see that --  
 22 RIPPERDA: That's outside of your contaminated  
 23 area.  
 24 BURIL: -- all of them came in negative for VOCs  
 25 and all of them came in at what I term background

50

1 concentrations for metals.  
 2 RIPPERDA: But that doesn't answer the question  
 3 of, in your area of contamination have you like  
 4 sampled around those seepage pits or cesspools or  
 5 whatever you call them?  
 6 BURIL: Oh, yeah. In fact, that's where all the  
 7 various soil borings and so forth were placed  
 8 specifically to try to get either right in it or as  
 9 close to it as we physically could.  
 10 RIPPERDA: Okay.  
 11 BURIL: So, yeah, it's basically been addressed  
 12 through those. And then those were the ones that  
 13 were converted into -- what was it? 24 of those  
 14 that we put it into the soil vapor wells?  
 15 RANDOLPH: Right.  
 16 BURIL: And then we monitored those as well to  
 17 see what was coming out of there in terms of soil  
 18 vapor.  
 19 RIPPERDA: I guess this just kind of sticks in  
 20 my mind, because at the Raymond Basin meeting you  
 21 had asked Mark, you identified these pits 10 years  
 22 ago and what have you done? You haven't even done  
 23 anything with the pits. I just --  
 24 BURIL: You'll like this next one, then, won't  
 25 you? In fact, Alex, you and Mark are both quoted in

51

1 this.  
 2 RIPPERDA: Really?  
 3 ROBLES: Yes.  
 4 BURIL: Yes. I wanted to talk a little bit  
 5 about it.  
 6 RIPPERDA: Good? Bad? Indifferent?  
 7 BURIL: Pardon?  
 8 RIPPERDA: Good? Bad? Indifferent? Did we  
 9 make fools of ourselves?  
 10 BURIL: Well, no, you didn't make fools of  
 11 yourselves, but some of the comments might have been  
 12 taken out of context, which is what I wanted to kind  
 13 of understand.  
 14 RIPPERDA: It was actually taken out of context.  
 15 ROBLES: You need to read it.  
 16 BURIL: Yeah, you need to read it, obviously.  
 17 It may be a good thing to just take a look at and  
 18 I'll point out a few of the things that caused us a  
 19 little bit of discomfort, not from what you folks  
 20 said, but just because --  
 21 Well, here's the front page. "More than a  
 22 decade after JPL contaminated local water wells,  
 23 nobody is coming clean - and you still can't drink  
 24 the water."  
 25 That's the tenor of the entire article. I

52

1 won't jump the gun on that.  
 2 Go ahead, Alex.  
 3 CARLOS: I think, to go back to the soil gas  
 4 data, do you think it would be possible to contour,  
 5 for example, each of the --  
 6 BURIL: Actually, we tried that once.  
 7 CARLOS: -- for each of the major compounds we  
 8 have and for each of the sampling?  
 9 BURIL: We tried that once. It turned out to be  
 10 a real -- it turned out to be a real nightmare  
 11 because of the topography of the site. When you  
 12 have certain things that are up high that you can  
 13 draw a circle there, but then when you go further  
 14 down and draw another circle and just the  
 15 three-dimensional nature of this place just tends to  
 16 make it very difficult. It's not like the  
 17 groundwater that's all basically a flat surface  
 18 throughout. We've got varying levels as a result of  
 19 the topography. So contouring it, unless we took  
 20 horizontal slices across the entire site and looked  
 21 at those individually, it was a really difficult  
 22 thing to try to understand. So we haven't tried  
 23 that, as far as I know. We're not planning on it  
 24 either; right?  
 25 RANDOLPH: No. It's a nightmare. I actually

53

1 had nightmares over it just trying to figure out how  
 2 we could possibly do it. And trying it out, it just  
 3 didn't work.  
 4 BURIL: We've thought about trying to do this  
 5 and so on and so forth, the GIS system also, and we  
 6 tried to work something out. The length of time it  
 7 would take for us to set that up is just fairly  
 8 prohibitive. So we haven't really pursued that per  
 9 se. We've been more or less convinced, based on  
 10 some of the data that we've had on soil types, and  
 11 now that we have the extraction test data, that  
 12 while contouring may be illustrative in one sense,  
 13 but it probably doesn't lend any more information  
 14 than what we already have, and that is that we think  
 15 that the extent of the plume that needs to be  
 16 remediated comes right in this area here and then  
 17 from that perspective we're just faced with a design  
 18 question, how many wells we need and where to put  
 19 them and so forth.  
 20 RIPPERDA: (Unintelligible) contour, and I  
 21 agree, you shouldn't contour something that's, you  
 22 know, somewhat random. You just put the numbers in  
 23 little boxes next to the wells.  
 24 BURIL: That we can do.  
 25 RIPPERDA: It's like instead of like 36, 36, and

54

1 then 16.  
 2 BURIL: We can try to do that. The only thing  
 3 that I'll point out, it's only a question of  
 4 clarity, is that we get so many numbers on the map  
 5 that becomes very difficult to read, that's all.  
 6 RIPPERDA: Yeah.  
 7 BURIL: We can try. I'll encourage B.G. to go  
 8 ahead and take a look at a way to do that.  
 9 RIPPERDA: Especially when you get some formal  
 10 reporting, like an RI or something that is going to  
 11 be administrative record document that's releaseable  
 12 to the public and you don't want to hide in detail,  
 13 so, you know, you have one map of carbon tet, one  
 14 map of trichloroethene. (Unintelligible) major  
 15 constituents so you show all the TCE numbers.  
 16 BURIL: Sure. As a matter of fact, we've done  
 17 that on groundwater maps, haven't we?  
 18 RANDOLPH: Yes.  
 19 BURIL: We can do something very similar.  
 20 GEBERT: I don't see any PCE detected in any of  
 21 the --  
 22 RANDOLPH: That's correct.  
 23 BURIL: Isn't that interesting.  
 24 GEBERT: Hasn't that been detected?  
 25 RANDOLPH: It has been in one of the earlier 24

55

1 wells we put in. Very, very, very low  
 2 concentration.  
 3 GEBERT: And it's in the monitoring wells;  
 4 correct?  
 5 BURIL: This goes back to an interesting  
 6 scenario that maybe Alex and Mark haven't heard,  
 7 but, Rich, I think you were involved in the very  
 8 beginning when you came on with us, and that is that  
 9 based on the data that we're seeing so far both in  
 10 the groundwater and in now the soil vapor analytical  
 11 work, that PCE doesn't seem to be our concern, at  
 12 least in terms of us being the source. We can't  
 13 find it here on site at concentrations that would  
 14 indicate we are a source. In fact, the PCE appears  
 15 to be coming from someplace upgradient. Exactly  
 16 where and exactly how it flows by JPL or any other  
 17 locations is something of mystery.  
 18 But we have had documented instances of  
 19 PCE at the Valley Water Service wells, which are  
 20 about a quarter to a half mile upgradient of us.  
 21 And the concentrations there were several hundred  
 22 parts per billion. As a result, they, quite  
 23 honestly, were looking to us as the potential  
 24 source, recognizing some of the groundwater reversal  
 25 issues and so forth.

56

1 But we don't have it here on-site, I mean  
 2 at least as far as anything we can find in the vapor  
 3 or anything that we see in the groundwater. And, in  
 4 fact, one of the reasons that we wanted to do more  
 5 work in the southern part of the Lab and defining  
 6 more of the groundwater with the last three wells  
 7 that we put in was to try and understand, well, is  
 8 there some mechanism that's doing this that we don't  
 9 understand that may be creating the problem.  
 10 Based on all the data we have, our  
 11 conclusion is that JPL is just not the source of the  
 12 PCE. It appears to be something that's coming from  
 13 an upgradient source or non-point source, however  
 14 you want to look at it. And in fact, it's coming  
 15 down through the area that I have affectionately  
 16 termed "the foothill funnel" between the hills of  
 17 JPL and the hills of Flintridge. It basically comes  
 18 right down past Oak Grove Park into the Arroyo Seco  
 19 area and is then pulled in by groundwater pumps for  
 20 the City of Pasadena, Lincoln Avenue and so forth.  
 21 I'll pass along as a point of interest  
 22 that the Rubio Canyon well, which is even further  
 23 south and further east than the most southerly City  
 24 of Pasadena water supply well, has been shut down  
 25 because of PCE contamination. There are 8 parts per

57

1 billion over there. And most of the other wells to  
 2 the north have had their PCE concentrations  
 3 basically drop off. I think that can probably be  
 4 explained through a tremendous amount of water  
 5 that's been inundating the area and recharging the  
 6 aquifer and they have spreading going on and so  
 7 forth. That makes some sense to me.  
 8 The fact that we've never seen any  
 9 concentration of PCE on the Lab that would be above  
 10 an MCL, yet we see greater than MCL in the City of  
 11 Pasadena wells, as well as now the Rubio Canyon  
 12 well, leads me to the fairly obvious conclusion  
 13 we're not the source. We can't make it up as we go  
 14 along. We still don't know what to do about that.  
 15 PCE is something that we'll probably deal with just  
 16 as an outcome of any remediation that we do here on  
 17 site.  
 18 ROBLES: If we have a remediation and it's a  
 19 matter of PCE going by and we suck it up, that's  
 20 fine. We're not going to go after PCE.  
 21 BURIL: That's where we're at with our vapor  
 22 sampling and the extent of the soil vapor extraction  
 23 test.  
 24 I already waved this thing around a little  
 25 bit. Why don't I go ahead and pass it out.

58

1 Does anyone else have any other question  
 2 on the soil vapor stuff?  
 3 I think everyone is probably interested in  
 4 this one here. It's an interesting article, to say  
 5 the least. Let me explain about the Pasadena  
 6 Weekly. It is a free publication that's sent out to  
 7 the folks -- not even sent out. It's actually just  
 8 made available.  
 9 ROBLES: You see these on the sidewalk.  
 10 BURIL: Yeah, you see these on the sidewalk kind  
 11 of thing. I honestly don't know if they have a,  
 12 quote-unquote, circulation. But, for example, we  
 13 had a newsstand that gives these things away here at  
 14 JPL, right at the Visitor Control. In fact, that's  
 15 where we got our copy of it. It was right there at  
 16 JPL Visitor Control.  
 17 These folks have a circulation,  
 18 reportedly, as you can see up here in the upper  
 19 right, of 35,000. And my understanding is that --  
 20 is this the one that's associated with the L.A.  
 21 Times now?  
 22 NOVELLY: I don't know who bought them. I know  
 23 somebody new just brought it and they're looking to  
 24 make some changes.  
 25 BURIL: I think it may be the other newspaper in

59

1 the area, the Pasadena Star News, that was bought  
 2 out by the L.A. Times. This came out a week ago  
 3 today, as a matter of fact.  
 4 CARLOS: Remember I called you that someone  
 5 interviewed us.  
 6 BURIL: Yes. I remember you did mention that.  
 7 ROBLES: Karen Bicos.  
 8 BURIL: Bicos, yeah.  
 9 CARLOS: One thing I like about the picture here  
 10 is monitoring well with magnetic gauges measuring  
 11 groundwater  
 12 BURIL: Yeah. I liked that too. I liked it  
 13 especially when I saw the magnetics were reading  
 14 zero, too. I thought that was pretty good.  
 15 HOSANGADI: And actually those are the A and the  
 16 B wells, going from left to right, or from right to  
 17 left.  
 18 BURIL: This is actually Vitthal's test and I  
 19 think he tentatively identified that as what? Well  
 20 17?  
 21 HOSANGADI: 27.  
 22 BURIL: Excuse me. 27, yeah.  
 23 HOSANGADI: I think that's what it was.  
 24 BURIL: So it's kind of interesting. I will  
 25 share with you an interesting sidelight to this, and

60

1 that is that we did not supply this picture of the  
 2 well to the newspaper. It was provided outside of  
 3 our knowledge, because these folks wanted to come in  
 4 and take a bunch of pictures and JPL declined them  
 5 access to do so.  
 6 I encourage you to read the story, in  
 7 particular, some of the quotes that were attributed  
 8 to both Alex and Mark. I think that there's factual  
 9 concerns potentially, depending upon what was  
 10 actually said. But certainly the way it was  
 11 portrayed in the article, I feel like I have to give  
 12 you folks the opportunity to defend what you see  
 13 here because it seems to me like it was taken way  
 14 out of context, as the way that I read it when I  
 15 first read this thing and said both Alex and Mark  
 16 said "Cleanup's at a dead halt. There's nothing we  
 17 can do." I just don't believe you folks actually  
 18 believe that to be true.  
 19 RIPPERDA: No. Unbelievable.  
 20 CARLOS: No.  
 21 RIPPERDA: I'm scanning for my name here and 90  
 22 percent of what I said isn't even in a quote. It's  
 23 just like "Mark Repperda, EPA's -- "  
 24 ROBLES: This comes out to the point of we have  
 25 a community relations plan. But when the newspapers

61

1 come in with this, I've talked to -- myself and my  
 2 boss are quoted in here, which they were here for --  
 3 BURIL: Bob was quoted in here too?  
 4 ROBLES: Yes. Olga Dominquez and myself.  
 5 BURIL: Oh, Olga. I thought you meant Bob.  
 6 ROBLES: And they were taking it out of context.  
 7 I thought they were looking at how is the program  
 8 going, and are you going to continue the program and  
 9 so on.  
 10 I told them what the issue was and I kept  
 11 emphasizing that we have concern for the human  
 12 health and that's why we're doing the work and we've  
 13 mitigated the human health factor, this issue, that  
 14 drinking water is the major concern. That's what  
 15 we're dealing with.  
 16 We said it, but it didn't come through.  
 17 Because the whole title was "you can't drink the  
 18 water." The purveyors of water are saying "We have  
 19 always given everybody water that meets drinking  
 20 water standards, period." That's never come through  
 21 this article.  
 22 So the question comes in now, because you  
 23 see this is part of five lawsuits that are pending.  
 24 And the question that comes in is, yes, we can deal  
 25 with the community. But these newspapers, I'm at

62

1 the point right now where I'm just going to tell  
 2 them "Sorry. I have no comment. Because you guys  
 3 take everything out of context."  
 4 CARLOS: In fact, there were some questions that  
 5 was not even included in the article.  
 6 ROBLES: Right. My thing is I believe that as  
 7 an RPM committee I think it should be our policy  
 8 that from now on if they want an answer from us it  
 9 should be on an official basis. It should come from  
 10 the committee, not from the individuals. Because,  
 11 you see, they'll come and take everything that they  
 12 want and just --  
 13 CARLOS: Pull out the information they want.  
 14 ROBLES: Right. And they can skew it. You  
 15 know, it's a classic, when did you stop beating your  
 16 wife. It doesn't matter what you answer, you're  
 17 just found guilty. In this case that's the same  
 18 problem here. They'll ask a question and take what  
 19 they want to use. They already had the headline,  
 20 you know, "you can't drink the water."  
 21 Well, that's not so. You can drink the  
 22 water. It meets standard. Is it pure? That's a  
 23 different question. So that's the key. And that  
 24 can't never come out. And what it needs to be is  
 25 that we need to crank up our community relations

63

1 with a fact sheet to go out and argue against this.  
 2 BURIL: In fact, you've actually touched on  
 3 something that we've talked about internally, and  
 4 that is that we've reached a milestone in the  
 5 program overall and we've completed the remedial  
 6 investigation work for groundwater. We've basically  
 7 completed it for the Operable Unit 2 sources. The  
 8 RI draft for Operable Unit 1 is due to you folks in  
 9 just about two months. And so I think we're  
 10 probably at a crossroads now of letting the public  
 11 know where we're at and what it is that we think  
 12 we're seeing with this water.  
 13 ROBLES: We should do it in a fact sheet.  
 14 BURIL: I agree.  
 15 GEBERT: When was the last time you issued a  
 16 fact sheet?  
 17 BURIL: Oh, probably the last time was a year  
 18 plus ago.  
 19 ROBLES: So it's a perfect time for us to do  
 20 that, to refute this, to show what the program is  
 21 and to say it, you know, and to get the purveyors of  
 22 water on line as well.  
 23 BURIL: I think that dealing with the purveyors  
 24 of water is certainly something we should, you know,  
 25 give them an opportunity to look at the fact sheet

64

1 and have some opportunity to comment on it.  
 2 RIPPERDA: They can't be happy about this  
 3 either.  
 4 BURIL: Oh, no. They're really ticked.  
 5 ROBLES: But I really think that what should be  
 6 addressed in the fact sheet is that the Pasadena  
 7 Weekly was not factual with their facts and the  
 8 statements were taken out of context. They won't  
 9 like it. But from now on whenever a newspaper, and  
 10 I have an article on my desk about the Star News,  
 11 and that was even worse. The Star News was talking  
 12 about the RPMs and the PRPs that are involved here  
 13 and so on. They skewed that whole issue up. It's  
 14 whenever they need something filled, they say "Okay.  
 15 Six months. Now is the time. Let's put a Superfund  
 16 article in the paper and get everybody fermented."  
 17 GEBERT: Yeah, I think you're going about it the  
 18 right way as far as issuing a fact sheet.  
 19 ROBLES: Let's get out with a couple of fact  
 20 sheets on these issues.  
 21 GEBERT: The other alternative you said if the  
 22 reporter calls, you have no comment.  
 23 ROBLES: No.  
 24 GEBERT: That's really not -- unfortunately this  
 25 is a fact of life.

65

1 ROBLES: Right. And say "No, I don't have a  
2 comment, but I will send you a fact sheet on the  
3 information." That's how it should be. So any time  
4 they call you or me we say "Here's the fact sheet.  
5 There it is." They're still going to skew it. You  
6 got to understand it, you know, if it don't bleed it  
7 don't read. That's now they view it. We're never  
8 going to get out of bad press. But at least, then,  
9 it's consensus and it's not taken out of context.  
10 BURIL: I think if you read this page here, kind  
11 of the crux of the two big show-stopping issues are  
12 on the bottom of the picture there. "As new  
13 chemical discovery brings JPL toxic cleanup to a  
14 halt, NASA accuses Cal Tech, Army and Pasadena of  
15 not paying their shares." Both of these statements  
16 are incorrect and inflammatory.  
17 What they're referring to is an I.G.  
18 report which NASA and Cal Tech took great exception  
19 to. But regardless, they are the I.G., inspector  
20 general.  
21 ROBLES: Right. They have the I.G. reports. We  
22 disagree with the I.G. report. They even asked me,  
23 "You're going after Pasadena." I said "I can't make  
24 any comments now. I'm actually doing negotiations.  
25 I can't do that." But they still take it.

66

1 BURIL: Anyway, it sounds to me you folks were  
2 taken out of context.  
3 ROBLES: Taken for a ride.  
4 BURIL: And certainly it's something I wanted to  
5 be sure you were aware of and certainly our folks at  
6 Cal Tech. And I've been in a couple of meetings now  
7 with legal folks, public affairs folks and so on to  
8 talk about, well, do we want to even try and push  
9 back at this, and the fact sheet was actually the  
10 mechanism that we came up with.  
11 RIPPERDA: So no letter to the editor?  
12 ROBLES: No.  
13 BURIL: That may not come. It may come some  
14 other time. But at this point it's being viewed as  
15 probably just giving them more fuel to throw on the  
16 fire.  
17 ROBLES: The fact sheet will be the best thing.  
18 And the fact sheet I think we have a larger  
19 circulation.  
20 RIPPERDA: The fact sheet would not mention this  
21 paper, would it?  
22 BURIL: Not likely, no.  
23 RIPPERDA: Because you've scared me when you  
24 said the fact sheet to refute it.  
25 ROBLES: No, no. I don't want to -- no.

67

1 RIPPERDA: Okay. Good.  
2 ROBLES: If you start throwing stones at one  
3 another the public just "What's going on? There's  
4 something here."  
5 Just say our program, what it is, get the  
6 purveyors of water on board from the standpoint of  
7 saying "Your water is safe to drink. It meets  
8 drinking water standards." If there's a problem  
9 with it, explain to them that your water is safe to  
10 drink. Don't talk about the issue about the article  
11 and don't talk about the issue about the Hodgkin's  
12 disease and so on. That's a court issue. Try and  
13 extrapolate, well, you know, she got Hodgkins's  
14 disease.  
15 BURIL: And who's paying for what is not an  
16 issue.  
17 GEBERT: No. Just the facts.  
18 ROBLES: Just the facts. That's it. And just  
19 get it to every house that we can.  
20 BURIL: We have a circulation of about 20,000  
21 for the fact sheet and we have a smaller special  
22 circulation that's sent to the city council members  
23 and Raymond Basin Management Board members and so  
24 forth. That's what we were planning on doing. I'm  
25 glad that you made a big segue in going to this.

68

1 One of the things I'm going to ask for  
2 from each of you is, recognizing that you're going  
3 to have to bring other folks in as far as community  
4 relations review and so forth, but when we get you  
5 the fact sheet, it's been an unfortunate situation  
6 that oftentimes the fact sheets get bogged down in  
7 regulatory agencies, and whether that's as a result  
8 of anything, I don't know. But the last one took  
9 almost six months to get through the full process.  
10 Six months from now this is going to be old news and  
11 I don't really think we want to wait that long.  
12 So just as a request when we do get that  
13 to you, and I would say probably within the next  
14 couple of three weeks we will have a draft to you  
15 folks, if you can accelerate your process to the  
16 greatest degree that you can so we can make this  
17 thing worthwhile both in terms of the timing of the  
18 project and in terms of timing this and anything  
19 else that comes up, I think it would be the greatest  
20 benefit for all concerned.  
21 ROBLES: Of course, some of your community  
22 relations people would want to go, "Let's have a  
23 town meeting." No, it's too early. We have to come  
24 up with remediation of what we're going to do; not  
25 just a study, but exactly what we're going to do.

69

1 Almost a pre-ROD. I'm very concerned about  
2 particularly EPA community relations folks who want  
3 to have open meetings right now. It's the wrong  
4 time to do that.

5 RIPPERDA: I agree that you don't -- when you  
6 have a proposed plan, you have a public meeting, I  
7 don't think this kind of site calls for a town  
8 meeting. But I do know that my public relations  
9 folks are going to say "We've been asking you to do  
10 fact sheets for a year and you have been like  
11 poo-pooing the idea." And so --

12 BURIL: I think the best response to them, from  
13 my perspective, is to say "Look, we didn't have a  
14 lot more to say up until now because what we were  
15 doing was continuing with the work we needed to  
16 generate the RIs and everything else. Well, we're  
17 done with that. Now we've got a milestone. We're  
18 ready to talk to people about what we've done. It  
19 makes sense at this point."

20 Before we were just going to be saying  
21 "Well, we're still working, folks. We'll let you  
22 know when we're done." That's not saying anything.  
23 Now that we're done we have something to say and  
24 it's the right time to say it.

25 CARLOS: Well, I know EPA, don't you guys

70

1 prepare a fact sheet also for each site?

2 RIPPERDA: Not for a federal facilities, because  
3 these guys are the lead agency. So if EPA is  
4 spending the money in cleaning it up, we issue  
5 regular fact sheets. But for a federal facility,  
6 it's their money. They're cleanup lead, so it's up  
7 to them to do their own fact sheets as they see fit.

8 BURIL: And then --

9 RIPPERDA: But that's why my --

10 BURIL: As I recall -- I'm sorry.

11 RIPPERDA: That's why my public relations  
12 people, and James before me, James cares much more  
13 about it than I do. I think every meeting he'd be  
14 asking you guys for a fact sheet just because EPA is  
15 used to giving out quarterly fact sheets even if  
16 there's nothing to say. It's like just tell the  
17 public everything is still okay. Just a bland  
18 reassurance.

19 BURIL: Also, as far as the review process goes,  
20 I just want to kind of revisit the pecking order, if  
21 you will, and that is that obviously, Mark, you have  
22 Andy that you'll be working with.

23 RIPPERDA: Uh-huh.

24 BURIL: There used to be a lady that -- I know  
25 that Debbie and the folks before her have worked

71

1 with. I can't remember her name now, I guess she's  
2 not involved anymore?

3 RIPPERDA: Yeah.

4 BURIL: Okay. And then, if I remember the  
5 process right at the state level, the Regional Board  
6 had deferred public affairs considerations to DTSC.

7 GEBERT: Yeah, they don't do much participation  
8 at all. We have a staff of community relations  
9 people.

10 BURIL: Yes, I remember some of the folks at  
11 DTSC being involved. I didn't recall anyone at  
12 Regional Board, so I just wanted to make sure that  
13 was still the case. Obviously you'll get copies of  
14 everything. But as far as a formal review, the  
15 Regional Board has in the past deferred to DTSC and  
16 I assume that's still the case.

17 ROBLES: I'm also going to recommend to the  
18 Raymond Basin that they put out their own kind of  
19 information. They need to do it for their  
20 customers.

21 BURIL: Well, let me encourage you folks to read  
22 this thing. If you have any other comments, then,  
23 by all means let me know.

24 (Unintelligible exchange)

25 GEBERT: We have people in Sacramento, if you

72

1 get a call from any reporter you are tied and bound  
2 to call that person in Sacramento first before you  
3 say one word other than your name, rank and serial  
4 number to the reporter.

5 BURIL: There's probably a good reason for that.

6 GEBERT: We've had a lot of problems with this,  
7 too.

8 (Unintelligible exchange.)

9 BURIL: Richard, let me ask a question just for  
10 the sake of continuity. On the fact sheets in the  
11 past we have typically given all the RPMs', agency's  
12 names and phone numbers if people had questions that  
13 they wanted to do. Not only for your situation but  
14 as well as Mark and Alex.

15 Is that something that we should continue,  
16 or should we have a different phone number other  
17 than your own for people to call if they have  
18 questions when they've read the fact sheet?

19 GEBERT: No. It's the same. They should  
20 contact the RPM.

21 BURIL: Okay. That's fine. I just wanted to be  
22 sure that was still the focus.

23 GEBERT: Then it's up to the agency to --

24 BURIL: Figure out what they're going to do.

25 GEBERT: Right. Through their own channels now,

73

1 the calls.  
 2 BURIL: That's good enough.  
 3 Any other questions, comments, general  
 4 disgust with this?  
 5 RIPPERDA: So what's the -- you have the RI  
 6 coming out in a couple months.  
 7 BURIL: Yes.  
 8 RIPPERDA: I guess this is actually -- I'll wait  
 9 until we get to number 6. Never mind.  
 10 BURIL: On the ATSDR Draft Public Health  
 11 Assessment, I played phone tag with Mark Weber and  
 12 ATSDR here for the last couple days and yesterday he  
 13 finally got the voice mail back to me that led me to  
 14 a schedule that they have in their house right now,  
 15 but they haven't really talked to anyone about it.  
 16 They're finishing up a draft, I guess it's what you  
 17 call a draft final. This is the one that goes out  
 18 for public comment. It's their tentative plan to  
 19 have that released either the week of August 3rd or  
 20 the week of August 10th. Their primary plan, Plan  
 21 A, says August 3rd. A backup, in case it doesn't  
 22 come together, is August 10.  
 23 I don't know from the agency perspectives  
 24 what you folks like to do in preparation for this.  
 25 I know that JPL/NASA is not planning anything

74

1 outright, but I'm sure that when something like  
 2 this, quote-unquote, hits the street and will be  
 3 advertised in various ways that it's available, that  
 4 we will have developed, potentially at least, a  
 5 response to query, what do you think about it?  
 6 What's your thoughts on it, so on and so on? I just  
 7 wanted to be sure that I brought this up to you  
 8 folks so you're aware it's coming and you can very  
 9 easily be in another situation of getting calls.  
 10 Whether it's from the Pasadena Weekly or anybody  
 11 else, I don't know.  
 12 The comments, based on what Mark was able  
 13 to leave me on voice mail, basically did not change  
 14 the overall conclusions of the initial draft report,  
 15 which I think you all had a chance to look at. So  
 16 there does not appear to be anything that we would  
 17 term a surprise as coming out of this. It's just  
 18 the next step in terms of completing the entire  
 19 process. So be aware. If you have any questions, I  
 20 think Mark's phone number was probably on that  
 21 initial draft that got distributed. If you don't  
 22 have it, give me a call and I can let you have it if  
 23 you want to talk to him directly.  
 24 Any questions on that one?  
 25 Mark, why don't you talk to us about the

1 groundwater monitoring and the latest stuff that  
 2 we've gotten so far.  
 3 CUTLER: What I'll do is, this is a draft report  
 4 of the last quarterly monitoring event. This is  
 5 post-RI data. The RI report, as Chuck will get  
 6 into, we have a draft version in house that's going  
 7 to go to Chuck in a week, a little more than a week.  
 8 BURIL: Actually, a couple weeks. But go ahead.  
 9 CUTLER: Yeah. Like the 29th, 28th. But this  
 10 data is not in there. Chuck just got this report,  
 11 so I didn't make copies of things. I just thought  
 12 we'd show you since Chuck hasn't really looked it.  
 13 BURIL: I doubt whether there's anything here  
 14 that's particularly scary. In fact, some of the  
 15 stuff on perchlorate is rather revealing.  
 16 CUTLER: So what I thought I'd do is just go  
 17 through some of the contour maps and if you had any  
 18 questions we can go into it deeper. You're familiar  
 19 with the aquifer layer concept that we did before.  
 20 Basically we have three aquifer layers on the site,  
 21 the upper layer, the upper 100 feet of the aquifer,  
 22 the next layer is maybe 150 to 250 feet of the  
 23 aquifer, and the bottom layer is the bottom couple  
 24 hundred feet of the aquifer.  
 25 BURIL: Let me point out one thing, too, that if

76

1 you folks have some thoughts in terms of suggestions  
 2 to improve the report from your perspective, please  
 3 share them with us.  
 4 CUTLER: This is the first quarterly event that  
 5 we have actually had data from the municipal wells.  
 6 The timing wasn't very good for our event, but we  
 7 threw on the closest data from your comments at the  
 8 last meeting.  
 9 This is carbon tet in aquifer layer 1. As  
 10 you can see, it's totally on site.  
 11 Carbon tet in aquifer layer 2. The  
 12 concentrations are much, much lower, but it does  
 13 extend off site. And as you can see, there's some  
 14 carbon tet in the Lincoln Avenue well, the first  
 15 Lincoln Avenue well. So we've extended the plume to  
 16 include that well.  
 17 This is carbon tet in the third aquifer  
 18 layer. Very low levels, basically at detection  
 19 limit. Just off site.  
 20 This is TCE in aquifer layer 1. TCE has  
 21 been detected in these wells up here.  
 22 In this particular you can see it's very  
 23 low levels, but there again, the way they sample  
 24 these wells, there's a lot of vacuums put on water,  
 25 a lot of aeration going on.

75

77

1 Let me back up a little. We didn't use  
2 numbers for production wells as numbers to contour  
3 on. We used those numbers to help define extent of  
4 plumes. So there's TCE up here, TCE here. All the  
5 flow directions are heading this direction, so we  
6 have in a sense what we describe as a commingling of  
7 plumes. I mean there's no real separations. As you  
8 can see, the MCL is a little bit on site and a  
9 little bit off site.

10 Here's the second layer. The plume has  
11 moved. It's deeper a little farther down gradient.  
12 The MCL line is right here. Not very much above the  
13 MCL.

14 In aquifer layer 3, basically the same  
15 thing like aquifer layer 2, just a little bit  
16 deeper. Here's the MCL out here.

17 As you'll see with our flow direction --  
18 actually, these wells are pumping into different  
19 aquifer layers. They're not in this, but they're  
20 being generated for the RI.

21 When these wells are pumping, the area of  
22 influence extends out to our Well 20 and so it  
23 appears in a drawing like this that maybe something  
24 is heading this direction. That would be the case  
25 when the pumps are off. But 90 percent of the time

78

1 these pumps are on and flow is actually in this  
2 direction in these lower aquifer layers.  
3 1,2-DCA, it's only been detected on site.  
4 It has a very low MCL. 1,2-DCA is not normally used  
5 as a solvent. It's probably a breakdown byproduct  
6 of TCE. We put it on there because it is above the  
7 MCL.

8 Aquifer layer 2, that's the only layer  
9 that it was detected in, 1,2-DCA.

10 Here is PCE. PCE is kind of detected in a  
11 lot of areas at extremely low levels.

12 You can see the maps, a little bit of TCE  
13 in here, all up in here, and, of course, the big TCE  
14 is from upgradient.

15 BURIL: T, or P?

16 ROBLES: PCE.

17 CUTLER: I'm sorry. P. Thank you.

18 As Chuck pointed out, it was up over 200  
19 parts per billion a couple years ago. Here it's 30s  
20 and 20s. It's never been above an MCL on site. And  
21 the flow directions, of course, are always in this  
22 direction.

23 BURIL: Mark, can you back up to that just for a  
24 moment.

25 CUTLER: Sure.

79

1 BURIL: Let me just point one thing out. If you  
2 look here and you have your flow directions like  
3 this, when these wells aren't pumping I wouldn't be  
4 surprised that the PCE would flow right past them.  
5 This is the well. I assume it was Los Flores.

6 (Unintelligible) This is the one that's currently  
7 shut down. That seemed to be on a direct path.

8 CUTLER: Right. There's no connection with PCE,  
9 any plume. It's a very random, low level hit.

10 Here's PCE in the second layer. Just a  
11 wide area of very, very low levels. Nothing over an  
12 MCL.

13 And in aquifer layer 3 there is a little  
14 bit above an MCL in Well 21. There again, the flow  
15 levels. They're above MCLs here. It flows this  
16 direction.

17 BURIL: Interesting point, too, there is that  
18 the concentration that's above an MCL is very deep,  
19 which doesn't really follow. If JPL were a source  
20 you would expect it to be shallower.

21 CUTLER: Right. There's a big disconnect  
22 between the PCE detected here.

23 And then, of course, everybody's favorite,  
24 perchlorate. Here's aquifer layer 1. And you do  
25 know there has been perchlorate detected in these

80

1 wells up here. They inject Colorado River water  
2 when they're not pumping, and so this is a source of  
3 perchlorate at very low levels. Of course  
4 perchlorate on site. And very similar to the TCE,  
5 you can have perchlorate in this general area.

6 Here's perchlorate in the next aquifer  
7 layer down. Again the concentration is decreased  
8 and it does extend off site a little bit.

9 BURIL: I will point out that the Arroyo well  
10 for the City of Pasadena is still off line as a  
11 result of perchlorate.

12 CUTLER: Right. There again --

13 RIPPERDA: That's one well?

14 BURIL: Yes, that's one well.

15 CUTLER: -- there's the perchlorate in our  
16 upgradient well here kind of in the middle of the  
17 aquifer. There again, right in line with the  
18 screens where it's been injected up here so this is,  
19 we believe, the off-site source for perchlorate  
20 coming down through here.

21 And this is the on-site source of  
22 perchlorate and they kind of commingle, getting  
23 sucked toward the production wells.

24 Here's perchlorate in aquifer layer 3.  
25 Just a little bit deeper, centered around the city

81



1 well. It seems to -- when these wells are pumping,  
 2 there again, flow is, even from Well 20, back this  
 3 direction. It's keeping it from going down  
 4 gradient.  
 5 That's the contamination.  
 6 BURIL: I'll point out a couple of other things  
 7 that were reported at the most recent Raymond Basin  
 8 Management Board meeting, which was what? A week  
 9 ago Tuesday? Wednesday? When was that?  
 10 ROBLES: Wednesday.  
 11 BURIL: Wednesday. All of the production wells  
 12 with the exception of the Pasadena Arroyo well had  
 13 shown a decrease in perchlorate concentrations. The  
 14 information, if I recall it correctly, is that only  
 15 the Arroyo well now has concentrations in excess of  
 16 the 18 part per billion limit. It is basically  
 17 exactly the opposite of the scenario which Raymond  
 18 Basin Management Board was trying to prepare itself  
 19 for. They were quite concerned that perchlorate  
 20 concentrations would rise dramatically and, in fact,  
 21 may even create a greater concern for the ability to  
 22 pump water and provide for their customers.  
 23 In fact, the exact opposite has happened.  
 24 It's become very evident that with a great influx of  
 25 water it seems apparently the generator of a very

82

1 small amount of perchlorate being pushed out. In  
 2 other words, either through dilution or through  
 3 change in groundwater flows or whatever, the  
 4 perchlorate's gone to almost nothing in all of those  
 5 production wells with the exception of the Arroyo  
 6 well.  
 7 And everyone's breathing somewhat of a  
 8 sigh of relief, although everyone's also still  
 9 apprehensive about what happens as the water table  
 10 drops. Since it did rise rather dramatically, the  
 11 expected problem then, it didn't happen. Maybe the  
 12 other side of the coin is true; as it drops they may  
 13 have a problem.  
 14 That's something we're going to be finding  
 15 out in the course of the next few months.  
 16 Okay. That's where we're at with the  
 17 groundwater monitoring. Any questions on that?  
 18 We'll have that report out probably in the  
 19 next couple, three weeks. I just had it in my hands  
 20 yesterday. I'm in the midst of dealing with a lot  
 21 of things on prime contract stuff, which I can't  
 22 talk about because Pete's in the room.  
 23 RIPPERDA: How do the levels in the perched zone  
 24 that you found in your vapor wells compare with the  
 25 underlying aquifer? Or maybe you just have high

83

1 water levels that are partly underlying. How do the  
 2 levels of contaminants in your vapor wells compare  
 3 to the monitoring wells in the immediate vicinity?  
 4 Are they similar or --  
 5 CUTLER: It sounds like there's two questions  
 6 about the perched groundwater and the soil vapor?  
 7 RANDOLPH: Perched water.  
 8 RIPPERDA: The perched water is in your vapor  
 9 wells; right?  
 10 RANDOLPH: Right.  
 11 RIPPERDA: How does the contaminant in that  
 12 water compare to the contaminant levels in your  
 13 groundwater monitoring wells proper in the immediate  
 14 vicinity of his stuff?  
 15 CUTLER: It was pretty close. Where he -- where  
 16 B.G. encountered perched water was very high levels  
 17 of perchlorate and VOCs was right near -- it was his  
 18 boring near Well 16, which has our highest levels of  
 19 perchlorate and high levels of the other VOCs.  
 20 RIPPERDA: Uh-huh.  
 21 CUTLER: The other perched water that B.G. ran  
 22 into had relatively low levels and he was right near  
 23 the nearest groundwater well that had low levels.  
 24 BURIL: Which well was that?  
 25 CUTLER: Well 8. So it fit with what we're

84

1 seeing in the groundwater.  
 2 RIPPERDA: My primary question was near Well 16  
 3 where your levels were the highest, were your levels  
 4 much higher than -- his levels and your levels.  
 5 Were your levels higher than your levels?  
 6 RANDOLPH: The levels were very similar.  
 7 RIPPERDA: Okay.  
 8 BURIL: I understand the reason for the question  
 9 and I think I can answer what I think is the concept  
 10 behind it, and that is that, no, it doesn't look  
 11 like we've found a source per se. It looks like we  
 12 just had the same concentration, so it isn't a  
 13 traditional source there.  
 14 RIPPERDA: Not the source or a source, but even  
 15 just like something that's higher than current  
 16 groundwater that's going to be more of a problem.  
 17 BURIL: More of a problem down the road. No, we  
 18 didn't see that at all, which I was kind of glad  
 19 about.  
 20 Any other questions? It's coming close to  
 21 lunch time. We can either press on or we can take a  
 22 break for lunch and finish up on the last couple  
 23 things and go on from there. How do you want to do  
 24 it?  
 25 ROBLES: Press on.

85

1 GEBERT: Press on. One more item here.  
 2 BURIL: Okay. Our RI/FS deliverables. This is  
 3 basically just a heads up to everybody to be sure  
 4 that you recognize what you've got coming down the  
 5 road to you. I believe the date is September 19,  
 6 and I'm sitting here wishing I knew, trying to  
 7 remember. But September 19th of this year you will  
 8 have delivered to you our draft risk assessment for  
 9 groundwater Operable Units 1 and 3.  
 10 You'll also be getting the remedial  
 11 investigation report for the groundwater units,  
 12 Operable Units 1 and 3.  
 13 And we are then on the pell mell race of  
 14 the schedules as imposed by the FFA. If memory  
 15 serves correctly, the FFA gives you folks, I think  
 16 it was 60 days to review that, both of those  
 17 documents.  
 18 I know. It gets worse.  
 19 We then, having received your comments, we  
 20 are obligated to have some form of a meeting to  
 21 discuss them. Whether it be telecon or whatever is  
 22 up to us, I think.  
 23 Subsequent to that, NASA/JPL has 60 days  
 24 to address the comments, generate a response to  
 25 comments document and provide the draft final report

86

1 for your review.  
 2 You then have 30 days to either accept it,  
 3 technically -- let's just be technical for the time  
 4 being. You have either 30 days to accept it or  
 5 invoke dispute resolution. In actuality, I'm  
 6 hopeful that we'll all be talking very carefully  
 7 together on those 30 days and anything that is  
 8 something that is easily taken care of at the draft  
 9 final stage to get to final we'd be more than  
 10 willing to deal with. If something is horrendously  
 11 out of sync between what we think and what you folks  
 12 are thinking, which I don't think is going to  
 13 happen, by the way, but if that does end up to be  
 14 the case, then we've got a more difficult situation  
 15 we'll have to deal with then.  
 16 RIPPERDA: So you're willing to make changes, if  
 17 they're acceptable to you, to a draft final without  
 18 going through dispute resolution?  
 19 BURIL: We have done so in the past. It depends  
 20 on the nature of it and so forth.  
 21 RIPPERDA: Some federal facilities are willing  
 22 to do massive rewrites in the draft final, and some  
 23 are saying like any change has to invoke dispute  
 24 resolution.  
 25 BURIL: We don't want to be that inflexible, no.

87

1 GEBERT: Have you ever invoked dispute  
 2 resolution?  
 3 BURIL: We came close.  
 4 GEBERT: But you haven't actually done it.  
 5 BURIL: But we haven't actually done it. The  
 6 predecessors to each of you were probably very  
 7 familiar with how close we came. And we did come  
 8 awfully close.  
 9 I think at this particular point it looks  
 10 as though the RA and the RI for the groundwater  
 11 operable units theoretically will go final right  
 12 about Christmas time.  
 13 ROBLES: What I would recommend is that you  
 14 prepare your teams that need to review it, get them  
 15 up to speed so that you could have some time  
 16 together.  
 17 The other thing is that we should schedule  
 18 at the next RPM meeting meetings after we hand them  
 19 because we need to meet together; not just one, but  
 20 a couple of meetings to resolve any issues.  
 21 BURIL: In fact, I wanted to make you aware that  
 22 the FFA does call out the requirement of a meeting  
 23 subsequent to the submission of your comments. So  
 24 we definitely want to follow through on that.  
 25 Again, that can be a telecon or a face to face

88

1 depending on how we want to do that. Then it's up  
 2 to us, based on the interchange of information, as  
 3 to how many meetings we need and for what purpose.  
 4 But certainly over the course of the next few months  
 5 I'd say that we should at least be planning no less  
 6 than the monthly telecons we currently have in place  
 7 and perhaps be prepared to increase the frequency to  
 8 weekly, if need be.  
 9 ROBLES: Weekly if we have to, on certain  
 10 subjects so we can meet the deadline.  
 11 BURIL: I think, as Peter said, getting your  
 12 teams alerted to the fact these are coming in the  
 13 door and they are running on the FFA schedule now  
 14 and while there's ability to extend and so forth if  
 15 there's need to be, I think it's good to have the  
 16 heads up that it's coming through the door and  
 17 everyone is on the same train going like crazy to  
 18 the end.  
 19 RIPPERDA: Yeah. And I'll certainly let my --  
 20 I think it's the only two people I have to worry  
 21 about, my toxicologist and lawyer -- lawyer looks at  
 22 it for ARARs just to make sure you got them all  
 23 listed there correctly.  
 24 BURIL: We'll hope so, yeah.  
 25 RIPPERDA: So I'll let him like, you know, have

89

1 me scheduled in for mid September. But I can't  
 2 imagine this is that -- you're just looking at  
 3 groundwater here and if you've got all these  
 4 monitoring reports, the data seems pretty  
 5 straightforward.  
 6 ROBLES: You just never know.  
 7 BURIL: From a technical perspective, yeah. But  
 8 like we've seen, you just never know.  
 9 RIPPERDA: There's a difference between an RI  
 10 report among like --  
 11 BURIL: Among technical professionals versus --  
 12 RIPPERDA: -- versus a newspaper article that's  
 13 total bull shit. The risk assessment, it's like I'm  
 14 not a risk assessor, but even that doesn't look that  
 15 complicated.  
 16 BURIL: I don't think it will. It may be  
 17 complicated by perchlorate.  
 18 RIPPERDA: Then you only rate what you know.  
 19 The number that exists is 18 without really like the  
 20 cancer risk range or anything associated with it, so  
 21 all you can do is compare to a --  
 22 BURIL: The only thing that I would say that  
 23 would be a confounding factor in the review of the  
 24 risk assessment is whether or not the goal that was  
 25 stated at the Henderson meeting for getting a

90

1 reference dose established for the perchlorate by  
 2 October actually happens, because at that juncture  
 3 everything changes. We don't have that now.  
 4 ROBLES: And I doubt that's going to happen.  
 5 The Henderson made it very clear that even though  
 6 the Air Force would want to do it, they're not going  
 7 to have the forces to write it.  
 8 RIPPERDA: So like I don't know how you write  
 9 that as far as like what's the list, perchlorate --  
 10 BURIL: We're writing it to the 18 parts per  
 11 billion, as far as I know.  
 12 RIPPERDA: But you at least compare it to an  
 13 action level. Even if you can't assign a risk to  
 14 it, you call it an action level.  
 15 BURIL: And that's what we're doing.  
 16 CUTLER: EPA, I guess, does have a reference  
 17 dose based on 18 mg/l. It might not be EPA, but the  
 18 State's number.  
 19 RIPPERDA: Yes.  
 20 ROBLES: It's a provincial level. That's what  
 21 you say, "We'll work to the provincial level until  
 22 more data comes in," and then we have to revisit.  
 23 BURIL: That's right.  
 24 GEBERT: You have to work with what you have.  
 25 ROBLES: Right.

91

1 RIPPERDA: Yeah. And even, like the risk  
 2 assessment for all the volatiles, it's like that  
 3 toxicology is pretty standard, and you like  
 4 calculate the risk and you do the cumulative for all  
 5 the different chemicals, you present it and that may  
 6 be in the acceptable risk range, but it's still  
 7 above MCLs or whatever. So it seems like it should  
 8 be straightforward.  
 9 BURIL: We hope so.  
 10 Okay. Any questions as far as what's  
 11 coming down the pipe to us?  
 12 RIPPERDA: Yes. And then longer term what's the  
 13 current schedule, assuming you meet the 60, 60, 30?  
 14 Then what about the proposed plan, or not the  
 15 proposed -- what about the FS?  
 16 BURIL: Mark, do you remember off the top of  
 17 your head?  
 18 CUTLER: The FS has been temporarily postponed  
 19 until this treatability study with Calgon really  
 20 gets going. That was --  
 21 RIPPERDA: The last time we kind of talked  
 22 informally --  
 23 BURIL: Yes. We had thought we would have the  
 24 treatability study going by now. We're about a  
 25 month behind. That's something that I'll share with

92

1 you, that was not our doing. That was Calgon's  
 2 doing because they had their equipment at the San  
 3 Gabriel site and San Gabriel had a pretty bad  
 4 problem as far as getting their well up and running.  
 5 Alex, maybe you remember. They said they had like a  
 6 five-week delay because of the well pump that  
 7 basically they screwed up. So we're running behind  
 8 there.  
 9 The overall schedule, as I recall, was  
 10 talking about like a six-month lag, wasn't it,  
 11 approximately?  
 12 CUTLER: It might have been. I think we  
 13 penciled in a date. That six months might have been  
 14 what -- I think it was a two-month lag and then we  
 15 moved it back because of the treatability study.  
 16 At the time when the original schedule was  
 17 put together the treatability study wasn't  
 18 anticipated. It was just VOCs.  
 19 BURIL: Yeah. And it was a paper study because  
 20 it was so well understood.  
 21 CUTLER: Right. I think you're right. That  
 22 sounds about right on where it is now.  
 23 BURIL: It's approximately a six-month lag.  
 24 Without having the schedule here right in front of  
 25 me, I don't know for certain, but that's what I

93

1 would anticipate. So sometime just after the first  
 2 of the year is what we'd be anticipating.  
 3 ROBLES: Get that by the next RPM meeting, that  
 4 date.  
 5 BURIL: Yes. Well, that's easily done.  
 6 RIPPERDA: Because a six-month lag from now  
 7 would be the first of the year. A six-month lag  
 8 from the RI wouldn't be until --  
 9 ROBLES: February.  
 10 BURIL: February. End of January, beginning of  
 11 February.  
 12 RIPPERDA: Okay.  
 13 GEBERT: I made a commitment to my boss to have  
 14 the RI/FS completed on OU-1 and 3 by June '99.  
 15 BURIL: You'll make that.  
 16 GEBERT: Can I have that in writing?  
 17 BURIL: No.  
 18 ROBLES: We've got to make it, too.  
 19 GEBERT: That's my deadline.  
 20 BURIL: Okay. I think that's doable, Richard.  
 21 I think that's doable.  
 22 ROBLES: Our goal is to get an ROD by end of  
 23 '99.  
 24 BURIL: I know. The key, of course, at this  
 25 point, as our good friends in the Pasadena Weekly so

94

1 eloquently stated, is trying to understand what we  
 2 do with our perchlorate. While the cleanup process  
 3 is by no means at a halt, as is claimed in so many  
 4 ways, the feasibility study will really hinge on  
 5 what this Calgon study tells us, and then we'll  
 6 decide whether there is something to be done, or  
 7 something else to be done, based on that study. And  
 8 it's the big key right now in sort of the overall  
 9 approach in planning the schedule.  
 10 RIPPERDA: The best response to this is to just,  
 11 you know, keep on -- ignore it kind of, but keep on  
 12 the process. The best response to this isn't to  
 13 respond to it directly, it's get your RI out, get  
 14 your FS out, get your ROD out, and even if, you  
 15 know, the Calgon study doesn't work, I've said this  
 16 before, and I know you agree with me, but you have  
 17 to push on with the FS and at least address what you  
 18 do know. What you can. You know, like say what you  
 19 can --  
 20 BURIL: What you can do or can't do.  
 21 RIPPERDA: -- and get that out there in the  
 22 public, you know, we're making decisions, we're  
 23 taking action. You've already taken the action, you  
 24 just haven't formalized it, so it's easy for people  
 25 to pick on you and say you've done nothing, when

95

1 actually we've done a lot. So the sooner you get an  
 2 FS and a ROD the sooner you'll be able to say we  
 3 completed our Superfund --  
 4 BURIL: Process obligation.  
 5 RIPPERDA: Yeah.  
 6 BURIL: I agree with that 100 percent. I think  
 7 that that's where we're at. We're at the point of  
 8 completion of the process for a lot of this. We're  
 9 no longer in the dark on what we have here or what  
 10 it is that we think we might have to do. The fact  
 11 that technology is running somewhat behind where  
 12 we'd like it to be in dealing with some contaminants  
 13 is something we're trying to deal with right now.  
 14 In fact, we're one the leaders in the country on  
 15 that.  
 16 So I don't feel any particular pangs of  
 17 remorse about having done what we have done thus  
 18 far. In fact, I think we've done a pretty damn good  
 19 job.  
 20 Okay. Pressing on.  
 21 CARLOS: The most recent submittal like the SVE  
 22 pilot test report, what's the deadline for the --  
 23 BURIL: We haven't established one. We've done  
 24 that kind of intentionally because we didn't want it  
 25 to hold back the ultimate RI/FS process where we'll

96

1 end up having to key on that.  
 2 As far as the latest version of the  
 3 report, the latest data, Vitthal, what was our  
 4 schedule for the first half of our already completed  
 5 SVE study? What was the schedule for providing a  
 6 report on that?  
 7 HOSANGADI: I believe September.  
 8 BURIL: So we're still on track with that. I  
 9 guess it's a question now, do we want to report out  
 10 on the first part of this while the second is  
 11 ongoing, the extended version? Or do we want to  
 12 postpone submittal until we have both pieces and  
 13 submit the entire thing?  
 14 GEBERT: For me, it would be better to wait  
 15 until you have the whole thing.  
 16 CARLOS: Maybe put everything in one package.  
 17 RIPPERDA: Since there's no decision being made  
 18 now except you are going to do an extended test,  
 19 like giving a preliminary report to them --  
 20 BURIL: I tend to agree with you. You already  
 21 know what the preliminary data say or the  
 22 preliminary report is going to say, that is that we  
 23 need for more information to deal with the anomalous  
 24 design conditions that we see on the site. It  
 25 doesn't look like we need to concern ourselves with

97

1 generating a report in September, but we'll need an  
 2 overall one definitely to factor into the  
 3 feasibility study for Operable Unit 2.  
 4 RIPPERDA: What's the kind of a schedule for the  
 5 RI for soils per vadose zone?  
 6 BURIL: Do you remember, B.G.?  
 7 RANDOLPH: No, I don't recall. It was up in the  
 8 air and we were vacillating back and forth on what  
 9 to do with it.  
 10 GEBERT: I think it was about six months behind  
 11 OU-1 and 3.  
 12 BURIL: That sounds right, Richard. I think  
 13 February, March next year, if I remember correctly.  
 14 RIPPERDA: So about when we get the feasibility  
 15 study we'll also get the soils RI within a month of  
 16 each other?  
 17 BURIL: The Gantt chart for the schedule of  
 18 these document reviews is just like a layer of  
 19 hot cakes, one thing after another, just continuously  
 20 from now until the end of next year. And it's a  
 21 good piece of work for anybody. We're all going to  
 22 have lots of things to do between now and then.  
 23 CARLOS: What was the SVE report submitted to  
 24 us? I think I got that two or three weeks ago.  
 25 Several reports.

98

1 RANDOLPH: Work plans.  
 2 CARLOS: Addendums?  
 3 RANDOLPH: Work plans.  
 4 BURIL: Oh, those were the work plans and  
 5 addenda to the work plans and all the things that we  
 6 wanted to finalize to make everything we've done  
 7 already, quote-unquote, official. That's all that  
 8 was.  
 9 ROBLES: I've got some items. I'm viewing,  
 10 Chuck, a copy of the Edwards Air Force Base  
 11 installation research and program support applicable  
 12 and relevant and appropriate requirements software  
 13 to determine ARARs.  
 14 What this is is a list of questions that a  
 15 Superfund site asks and all of the ARARs fall out of  
 16 it. This was done by the approval of all of the  
 17 three folks at Edwards, so EPA, State and Water  
 18 Board approve this method.  
 19 RIPPERDA: So as long as they know what they're  
 20 doing (unintelligible).  
 21 ROBLES: The reason for this was that when  
 22 Edwards went to the regulators and said "Give us  
 23 your ARARs," they said "We can't do that. We don't  
 24 know all the ARARs. We might leave something out.  
 25 You figure it out."

99

1 So that's what they did. They figured out  
 2 a software package, and basically what it does is  
 3 ask questions. "You got wetlands?" "Don't you have  
 4 wetlands?" "What kind of hazardous waste you got?"  
 5 "What kind of levels do you have?" "Are people  
 6 close to you?" "Drinking water level?" You know,  
 7 all those things. As it goes it just deletes the  
 8 inappropriate regulations so that it's only those  
 9 that apply.  
 10 I want Chuck to look at it and see if it  
 11 works, and then we need to talk about this at the  
 12 next RPM meeting.  
 13 BURIL: I was going to say maybe I can report  
 14 out on it at the next RPM meeting.  
 15 ROBLES: Because, you see, one of the questions  
 16 that's going to come up is, to the public,  
 17 particularly with lawsuits, "How did you figure your  
 18 ARARs out? You left something out." If we have a  
 19 process that already looks at it, that has it and  
 20 it's been approved through your organizations  
 21 already, then that's easier to deal with.  
 22 RIPPERDA: That's all fine and beautiful. It  
 23 makes your job easier. As far as like going to the  
 24 public and saying we used an officially approved  
 25 process by DTSC, Regional Board and the EPA, just

100

1 because our counterparts, fellow RPMs at Edwards --  
 2 ROBLES: Right. I understand.  
 3 RIPPERDA: -- said that's fine, that doesn't  
 4 mean it's an official EPA, DTSC, Regional Board.  
 5 BURIL: We used a recognized method, and by  
 6 doing so we reviewed it and found it to be  
 7 acceptable. Not the method, but the outcome.  
 8 RIPPERDA: Yeah.  
 9 ROBLES: But I want you guys to look at it as  
 10 well. That's the key. It's not that I -- I just  
 11 don't want you to rubber stamp it. But I wanted to  
 12 find something out there that has already been -- I  
 13 don't want to reinvent the wheel. Because this has  
 14 been a real -- since I've been here for four years,  
 15 the question every now and then: ARARs.  
 16 GEBERT: Right. It comes up with every site.  
 17 ROBLES: And we go, how do we handle this?  
 18 Who's going to provide it? Who's going to do the  
 19 leg work to figure it out?  
 20 BURIL: An interesting one that may or may not  
 21 come out of this, let me just throw a couple on the  
 22 table here, one which may be somewhat confounding to  
 23 us, and we discussed with all of your predecessors  
 24 at one point or another, is the adjudication of the  
 25 Raymond Basin. That was still something that was

101

1 kind of a "Gee, we don't know" kind of answer. I  
2 can tell you the folks from the Raymond Basin are  
3 going to be absolutely expecting to be part of the  
4 requirements that we must meet in order to deal with  
5 remediation.

6 ROBLES: In other words, the way we handle the  
7 water, where it goes to. That's the kind of thing.

8 BURIL: We have no rights to remove water from  
9 the Raymond Basin whatsoever. And as such, our  
10 influence on the basin as a whole has to be a net  
11 zero based upon that adjudication. So how we deal  
12 with that is going to have some fairly dramatic  
13 impacts on the feasibility study; how we get the  
14 water that's been removed, if we do have a pump and  
15 treat, back into the system so that there is a net  
16 zero influence.

17 GEBERT: The question is: Is it an ARAR or is  
18 not?

19 BURIL: Yes. And that's the spin, kind of a --  
20 the crux of the question has been: Do we have to  
21 include it? Because if we do, we have potentially a  
22 much different kind of remedial scenario than we  
23 might otherwise have.

24 ROBLES: The second thing I have is, and I am  
25 going to give to Chuck that I want him to give to

102

1 you after he looks at it, is what is an  
2 administrative record. I need you guys to approve  
3 it. That's the big sheet. I want him to go over it  
4 and look at that, because ultimately once we get to  
5 a ROD we got to decide what is in the administrative  
6 record.

7 This, again, comes from Edwards. They sat  
8 down and asked this question again: What is the  
9 administrative record in the State of California?  
10 And we have to be very careful. Is it everything we  
11 have done? I don't think so. So this is the  
12 universe that looks at this, a template. But we  
13 have to approve it and look at it, because  
14 ultimately that is what's going to hold,  
15 particularly with lawsuits pending and everything  
16 else. So I want to make sure. I would like to,  
17 once it's looked at internally here, to give it to  
18 you and your legal staff.

19 RIPPERDA: Yeah, I will certainly give that to  
20 my --

21 ROBLES: Right. And then say "Do you agree with  
22 this? Do you think there's something that shouldn't  
23 be there?"

24 RIPPERDA: Or should be.

25 BURIL: Or should be.

103

1 ROBLES: Those are the two things I think we  
2 need to start working on, since we now can see the  
3 light at the end of the tunnel.

4 RIPPERDA: I just had a request from an attorney  
5 to get all of Stephen's and some guy who works with  
6 you, whose name I don't know, all of their comments  
7 that have been submitted to EPA over the life of the  
8 project.

9 So I immediately I called up my attorney,  
10 and like "Do I have to do this?" The response is,  
11 no, I don't, until they formally do it through a  
12 judicial discovery motion. Then my attorney really  
13 probably thinks about it. There's just attorneys  
14 crawling out of the woodwork.

15 ROBLES: Well, I'm getting those calls for  
16 document production requests. That's causing a  
17 great concern. That's the main issue.

18 RIPPERDA: Yeah. That's right. That will be  
19 nice, because, you know, I know that his comments  
20 are like nowhere close to being part of the  
21 administrative record. And there's the first level,  
22 I guess, part of an administrative record, anybody  
23 can look at it. Is it something internal like for  
24 me, EPA, that I may have to produce and it's like  
25 what sublayer of detail may I have to produce.

104

1 ROBLES: Well, I've talked with Region 5 through  
2 my experience in over 20 years at this, plus the  
3 legal staff at NASA and also at the DoD and Air  
4 Force. The bottom line is that the administrative  
5 record is the ability that if I come in as John Q.  
6 Public 20 years from now and say "How the heck did  
7 you get to this point? What did you use to make  
8 this decision?" Those are the records that need to  
9 be in there. Everything else doesn't need to be in  
10 there. "How did you get those things?" The final  
11 document, not drafts, not your comments, not all  
12 that. The final documents. Okay. That's what we  
13 need. We need the minutes maybe. The key is those  
14 items, the technical stuff that I can look at and  
15 come and reconstruct the way that your  
16 decisionmaking process flowed. It fulfills the need  
17 of the Administrative Record.

18 BURIL: Just as an aside, you were mentioning  
19 about document production. I can sympathize  
20 tremendously. My entire organization is undergoing  
21 an influx of paralegals and they're going through  
22 virtually every single document we have in our  
23 possession, which is probably in the neighborhood of  
24 6-, 700,000 pieces of paper.

25 CARLOS: We're receiving the same requests.

105

1 BURIL: So it's going to get uglier before it  
 2 gets prettier, I'm afraid. My understanding is that  
 3 there are other potential lawsuits, if they haven't  
 4 already been filed, that are pending. Peter  
 5 mentioned five. That's one more than I was aware  
 6 of, so it sounds like it's already happened.  
 7 Okay. Let's visit briefly, then, the  
 8 action items from last time around and make sure we  
 9 got those closed. I'm going to hope they're all  
 10 right here on the backside of this. Let's see here.  
 11 RIPPERDA: While you're looking, even though I  
 12 hate the article, it's a great piece of cover art.  
 13 BURIL: It's a what?  
 14 RIPPERDA: It's a great piece of cover art.  
 15 BURIL: Yes, it is, isn't it. That was really  
 16 something.  
 17 The action items that we had was that Rich  
 18 Atwater was going to provide us some data from the  
 19 various outside water purveyors. We have received  
 20 that partially.  
 21 CUTLER: For perchlorate.  
 22 BURIL: We have received it for perchlorate. We  
 23 have not gotten it yet for all VOCs. Is that right?  
 24 Unfortunately, Rich couldn't be here  
 25 today, but we'll be passing that, continue to

106

1 request back on to him to make sure we have got the  
 2 information.  
 3 RIPPERDA: On that subject, when you talk about  
 4 your things being pre-RI or post-RI, like you said,  
 5 this is post-RI data, which means, I guess, these  
 6 results won't be included in the RI. How about the  
 7 data that Richard is providing?  
 8 BURIL: If it's for the time frame that's  
 9 covered by the RI sampling that we've done, it would  
 10 be, wouldn't it?  
 11 CUTLER: What we did with the perchlorate, we  
 12 picked the date that was closest to the RI. So I  
 13 think there might even be April or May perchlorate  
 14 data put in the RI. It's just the time we finally  
 15 got the data and that result was closest for the  
 16 January and February event than the previous  
 17 perchlorate data, if that makes sense.  
 18 RIPPERDA: Uh-huh.  
 19 CUTLER: So in that one instance we did pull  
 20 data from the RI.  
 21 RIPPERDA: So what goes into the RI isn't  
 22 determined by when you got the data, it's by what  
 23 time period the data represents?  
 24 CUTLER: Yes. It's the closest result to the  
 25 time when the JPL data was generated.

107

1 RIPPERDA: Why can't the data, since you have  
 2 it, why can't that go into the RI?  
 3 CUTLER: It did. It is. We couldn't wait. It  
 4 was going on. VOC results have been fairly stable  
 5 over the years. And I think since we're not using  
 6 that data to contour on, we're using that data to  
 7 help show extent of plumes, it's usable.  
 8 RIPPERDA: Okay.  
 9 BURIL: Okay. So we have that from Rich that we  
 10 still need to obtain.  
 11 The next thing I have in this list is that  
 12 we were going to get the ATSDR comments back from  
 13 everyone who felt they had a need to comment, which  
 14 we did. So that particular item is closed. ATSDR  
 15 has already incorporated them and noted to me in a  
 16 phone conversation that the comments were not  
 17 particularly difficult to incorporate and thus far  
 18 everything seems to be going very well.  
 19 And the last thing was, Mark, you were  
 20 going to check with Perianne Wood with regard to her  
 21 questions on radiation, a question that came to us.  
 22 Do you recall that?  
 23 RIPPERDA: Yes. And I did talk to her and she  
 24 said that she didn't have any more questions, that  
 25 she had talked to somebody from here and she didn't

108

1 remember it like exactly enough to know if the  
 2 report had actually been submitted or not. So her  
 3 questions have been answered, yes. And then she  
 4 didn't remember if she had gotten any kind of  
 5 physical report, so she just suggested that some  
 6 kind of report be made part of the administrative  
 7 record or something like that.  
 8 BURIL: So from the perspective of trying to  
 9 answer this action item, it sounds like we got it  
 10 done. Is that your --  
 11 RIPPERDA: Yes. She had forgotten about it  
 12 entirely. I had to remind her about it and then she  
 13 like "Well, I don't have any more questions," so  
 14 that's done. But then she had to make her  
 15 additional point of "Well, by the way, radiology  
 16 needs to have a report in the administrative  
 17 record."  
 18 BURIL: Okay. That was all the action items  
 19 from last time.  
 20 I think we're down to the point now of  
 21 actually setting the next time for a meeting. I've  
 22 got calendars here for August and September.  
 23 Interestingly enough, the next scheduled RPM  
 24 meeting, quote-unquote, is scheduled, if we follow  
 25 the three-month time frame, would land on the 17th

109

1 of September, which is extremely close to when we'd  
 2 actually be submitting the documents to you folks.  
 3 RIPPERDA: Three months from now is September?  
 4 October.  
 5 ROBLES: October.  
 6 BURIL: It's October. We got the wrong calendar  
 7 here. They didn't give me October.  
 8 ROBLES: October.  
 9 BURIL: Have you got October there? Thank you.  
 10 So we're looking at October 16th. 15th,  
 11 16th time frame. Week of the 12th, basically. The  
 12 12th is a federal holiday.  
 13 Does the week of the 12th sound reasonable  
 14 to everybody as far as your schedules? Why don't we  
 15 make it the 15th.  
 16 GEBERT: What day is that?  
 17 BURIL: Thursday.  
 18 ROBLES: That's a Thursday.  
 19 GEBERT: The second Thursdays of every month are  
 20 our staff meetings.  
 21 ROBLES: This is the third Thursday.  
 22 BURIL: This is the third.  
 23 GEBERT: That's fine.  
 24 BURIL: October 1 is the first Thursday.  
 25 GEBERT: That would be fine, then.

110

1 ROBLES: So it's the third Thursday of the  
 2 month. There are five Thursdays in the month of  
 3 October.  
 4 ROBLES: So let's go ahead and set it for  
 5 Thursday, October 15th. Perhaps a suggestion on  
 6 locations?  
 7 RIPPERDA: Here.  
 8 BURIL: Here is fine? Okay. Here at JPL at  
 9 10:00 a.m.? Okay.  
 10 Let me go ahead and just verify, then, two  
 11 additional things I think we should have on the  
 12 schedule, and that is our telecons for the months of  
 13 August and September. Currently we have the next  
 14 one scheduled for Thursday, August 6 at 10:00 a.m.  
 15 ROBLES: That's a San Gabriel 9:30 a.m. meeting  
 16 on the 6th.  
 17 BURIL: Maybe we want to change that one. What  
 18 do people have available that is plus or minus a day  
 19 of that kind of thing?  
 20 ROBLES: Can we do it Wednesday, the 5th? Is  
 21 that okay?  
 22 RIPPERDA: Yes.  
 23 ROBLES: Why don't we move it to Wednesday.  
 24 BURIL: All right. Move that one. So  
 25 Wednesday, the 5th. Can I request it at 10:30? I

111

1 have a 9:00 a.m. meeting that I can get out of by  
 2 10:30.  
 3 ROBLES: 10:30 a.m. telecon.  
 4 BURIL: Thank you.  
 5 Then in September, following approximately  
 6 the same time frame, it's either going to fall on  
 7 the week before or the week after Labor Day. What's  
 8 your choice of poison there? Either the 3rd or the  
 9 10th.  
 10 ROBLES: I think it should be the 10th.  
 11 BURIL: That way we can be a little closer to  
 12 document submission time.  
 13 ROBLES: But the 10th is the second Thursday and  
 14 you have a meeting; right?  
 15 GEBERT: Right.  
 16 ROBLES: Let's shoot for the 3rd, then.  
 17 BURIL: All right. We can do that.  
 18 ROBLES: RPM telecon on the 3rd of September.  
 19 BURIL: That one can be 10:00 a.m.  
 20 Okay. Anything else anyone wants to bring  
 21 up?  
 22 RIPPERDA: Just something like really small.  
 23 Stephen requested that in the future, I guess like  
 24 going from a draft to draft final, or draft final to  
 25 final that the response to the comments be in a --

112

1 I'll let you explain it, if you want.  
 2 NIOU: A matrix, from comment to in response be  
 3 listed in the matrix.  
 4 BURIL: I don't follow you at all.  
 5 Why don't you draw it on the chart there  
 6 and we'll understand what you're talking about.  
 7 NIOU: Just a table. This is the comment. All  
 8 it is, I'll give you SVE comment and this is JPL  
 9 response.  
 10 BURIL: Oh. All right.  
 11 NIOU: This is a matrix.  
 12 ROBLES: And then if it's done again on the  
 13 draft final and it's changed -- I know what you're  
 14 saying. So you have the first draft as all the  
 15 comments that come in and where does it come from  
 16 and our response, and just continue. If that  
 17 comment has been reformulated in the draft final  
 18 it's put on that matrix or if a new one is added,  
 19 and then that way you have a matrix of all of your  
 20 comments and responses.  
 21 NIOU: Yes.  
 22 ROBLES: It's easier to read that way.  
 23 NIOU: Yes.  
 24 BURIL: We'll have to work together on that  
 25 because I'm not sure how I would place an entire

113



1 response in a matrix.  
 2 RIPPERDA: It's just like a two-column table.  
 3 You type in Regional Board comment and JPL response.  
 4 BURIL: That's the way I've typically done it  
 5 for all the other ones we've done. I'll repeat it,  
 6 an EPA comment, ta-da-ta-da, JPL response, EPA  
 7 comment, JPL response.  
 8 RIPPERDA: We'll talk about it later.  
 9 BURIL: The last time we went around with a  
 10 response-to-comments document, the response to  
 11 comments was 120 pages long. So I'm hopeful we  
 12 won't have that again. But even if we come close,  
 13 putting it in a matrix format would be maybe even  
 14 more difficult.  
 15 ROBLES: Usually what is done is, you may have  
 16 120, 200 pages of comments, but they're synthesized  
 17 to small, you know, areas of concern, and then "See  
 18 response" and so on.  
 19 BURIL: When we get there we can sure look at  
 20 that, Steve. It's just a problem in trying to  
 21 figure out how to accommodate that.  
 22 ROBLES: I think the idea, Steve, is that you  
 23 want the matrix so that there's a column that says  
 24 "Addressed."  
 25 NIOU: Yes.

114

1 ROBLES: Or "Not addressed" or "Not  
 2 incorporated" or "Incorporated".  
 3 NIOU: And the result. Because they concur.  
 4 BURIL: Oh.  
 5 ROBLES: That's the key.  
 6 NIOU: There's no questions be asked.  
 7 BURIL: All right. I see. I see.  
 8 ROBLES: It's "Concurred," "Not concurred,"  
 9 "Incorporated," "Not incorporated."  
 10 BURIL: That's different than I was thinking of.  
 11 Okay.  
 12 ROBLES: It's not an idea of writing the whole  
 13 comment out there. I's just a synopsis.  
 14 BURIL: So EPA comment number 1; JPL/NASA  
 15 response concurred. EPA comment number 2; JPL/NASA  
 16 response concurred. Disagree, see such and such  
 17 page of text for explanation.  
 18 ROBLES: Exactly.  
 19 NIOU: Or you have your explanation right at  
 20 the --  
 21 BURIL: Depending on if it's small enough to  
 22 slide in there.  
 23 NIOU: -- because of this, this, this. That's  
 24 why we --  
 25 BURIL: I understand.

115

1 ROBLES: It makes it easier for dispute  
 2 resolution for someone to come in there and say  
 3 "Okay. How many comments do you have?" You had 200  
 4 and you only have five that are in dispute. Hey,  
 5 this is a no-brainer, just small details. But you  
 6 see the whole thing.  
 7 BURIL: I understand where you're coming from.  
 8 That's a good summary way of knowing where the  
 9 concerns might be. That's fine. I understand.  
 10 Okay. Anything else?  
 11 NIOU: One more thing.  
 12 RIPPERDA: Yeah. Go ahead.  
 13 NIOU: I'm just curious, what's the current idea  
 14 planned on the SVW-36 area?  
 15 BURIL: I'm sorry. What?  
 16 NIOU: Remember there's a shallow aquifer,  
 17 perched aquifer, SVW-36 that found high for  
 18 perchlorate and TCE.  
 19 BURIL: We have discussed that at the last  
 20 telecon.  
 21 NIOU: I just wondering any development.  
 22 BURIL: We have changed nothing. We do not plan  
 23 to pursue that at all at this point.  
 24 RIPPERDA: Is that different than what I was  
 25 asking B.G.?

116

1 RANDOLPH: No, it is not.  
 2 RIPPERDA: It's the same thing.  
 3 BURIL: It's exactly the same thing.  
 4 Okay. Anything else?  
 5 ROBLES: Your comment, what you're saying is  
 6 that what you found as a perched zone is a mix of  
 7 what you find in the well?  
 8 BURIL: Right. And it's based on that we don't  
 9 feel it's a necessity to do anything else.  
 10 ROBLES: It's not a source or anything. It's  
 11 just --  
 12 BURIL: No. If in the future we find there's a  
 13 reason to pursue it, then we will. But at this  
 14 juncture there's no reason.  
 15 ROBLES: Not a source or anything.  
 16 BURIL: No.  
 17 RIPPERDA: So in an RI, like, you know, even  
 18 though this is data you've collected, it's still  
 19 water data, so will you show the data from his  
 20 perched water table in your RI in some way?  
 21 CUTLER: It's in there. The draft in our office  
 22 now has it included.  
 23 RIPPERDA: Okay.  
 24 BURIL: Are we done?  
 25 Judy, why don't you run down the action

117

1 items for us.  
 2 NOVELLY: Today's action items, we're going to  
 3 get some literature on the perchlorate treatment  
 4 process to Richard.  
 5 Are you guys interested in getting that  
 6 too?  
 7 RIPPERDA: Yes.  
 8 BURIL: So all the agencies.  
 9 NOVELLY: Mark Ripperda has given us a draft  
 10 letter regarding discharge from the perchlorate  
 11 treatment water in the storm drain, and after he gets  
 12 back to his office in about a week he'll get us out  
 13 a final on that.  
 14 Right?  
 15 BURIL: Right.  
 16 NOVELLY: B.G. is going to attempt to make a map  
 17 showing the soil vapor results beside the sampling  
 18 points on the map.  
 19 We're going to get the FS date to the  
 20 RPMs.  
 21 Chuck is going to use the ARAR determining  
 22 software and report back at the next RPM meeting.  
 23 NASA/JPL will review the administrative  
 24 record list and then send that to the RPMs for their  
 25 attorneys to review.

118

1 We're going to continue working with Rich  
 2 Atwater to try to obtain the groundwater data from  
 3 the Raymond Basin wells.  
 4 And our next RPM meeting is Thursday,  
 5 October 15th at JPL at 10:00 o'clock.  
 6 Our next two telecons are Wednesday,  
 7 August 5th at 10:30 and September 3rd at 10:00  
 8 o'clock.  
 9 Also, we're going to look at using a  
 10 matrix to show response to comments rather than the  
 11 regular typed-out responses.  
 12 That's it.  
 13 BURIL: All right. Thank you all very much.  
 14 Appreciate your efforts, and we'll see you at least  
 15 in October.  
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119

## 1 CERTIFICATE

2  
 3 I, Lester R. Linn, Jr., CSR 1054, hereby certify  
 4 I am an appointed Certified Shorthand Reporter  
 5 authorized under CCP Section 2093(a) to administer  
 6 oaths.  
 7 I further certify that the foregoing pages  
 8 reported by me is a true and correct transcript of  
 9 the proceedings had in the above-entitled matter on  
 10 the date specified therein, and that said transcript  
 11 is a true and correct transcription of my  
 12 stenographic notes.  
 13 Dated at La Crescenta, California,  
 14 this 20th day of July 1998.

19 CERTIFIED SHORTHAND REPORTER 1054

120

July 16, 1998

SKINNYSCRIPT

## - NUMBERS -

'60S [2] 49:18; 49:19;  
 '94 [2] 40:14; 40:15;  
 '97 [1] 38:12;  
 '99 [2] 94:14; 94:23;  
 01 [1] 22:19;  
 04 [1] 19:23;  
 1,2-DCA [3] 79:3; 79:4; 79:9;  
 1/2 [1] 20:5;  
 10 [3] 20:9; 51:21; 74:22;  
 10-FOLD [2] 6:21; 7:2;  
 100 [4] 18:19; 29:7; 76:21; 96:6;  
 1054 [3] 1:25; 120:3; 120:19;  
 10:00 [5] 111:9; 111:14; 112:19;  
 119:5; 119:7;  
 10:08 [1] 2:3;  
 10:30 [4] 111:25; 112:2; 112:3;  
 119:7;  
 10TH [5] 3:15; 74:20; 112:9;  
 112:10; 112:13;  
 11 [2] 20:9; 38:3;  
 12 [5] 21:1; 29:17; 30:13; 30:20;  
 31:1;  
 120 [2] 114:11; 114:16;  
 1200 [1] 6:25;  
 12TH [3] 110:11; 110:12; 110:13;  
 13 [2] 27:25; 47:17;  
 13-WEEK [1] 29:17;  
 13TH [1] 21:14;  
 140 [1] 34:24;  
 1400 [1] 8:4;  
 15 [1] 19:24;  
 150 [5] 18:15; 26:3; 28:15; 33:1;  
 76:22;  
 15TH [4] 110:10; 110:15; 111:5;  
 119:5;  
 16 [5] 1:5; 2:2; 55:1; 84:18; 85:2;  
 160 [3] 22:20; 25:5; 35:4;  
 16TH [2] 110:10; 110:11;  
 17 [1] 60:20;  
 176 [1] 27:4;  
 17TH [1] 109:25;  
 18 [5] 36:2; 82:16; 90:19; 91:10;  
 91:17;  
 19 [1] 86:5;  
 190 [4] 49:20; 49:22; 50:17; 50:18;  
 1998 [3] 1:5; 2:2; 120:14;  
 19TH [1] 86:7;  
 2.5 [1] 20:1;  
 20 [6] 40:5; 50:16; 78:22; 82:2;  
 105:2; 105:6;  
 20000 [1] 68:20;  
 200 [7] 28:15; 33:1; 33:2; 33:4;  
 79:18; 114:16; 116:33;  
 2093(A [1] 120:5;  
 20S [1] 79:20;  
 20TH [1] 120:14;  
 21 [1] 80:14;  
 216 [2] 24:16; 25:4;  
 22 [1] 40:5;  
 24 [3] 23:16; 51:13; 55:25;  
 25 [4] 18:20; 23:10; 37:23; 38:17;  
 250 [1] 76:22;  
 27 [5] 23:5; 24:15; 24:17; 60:21;  
 60:22;  
 270 [1] 18:15;

27TH [5] 3:5; 23:14; 24:25; 25:20;  
 27:8;  
 28 [2] 37:24; 38:18;  
 28TH [4] 23:24; 24:2; 24:4; 76:9;  
 29TH [1] 76:9;  
 30 [6] 27:8; 40:3; 87:2; 87:4; 87:7;  
 92:13;  
 300 [1] 29:8;  
 303 [1] 47:19;  
 30S [1] 79:19;  
 32 [1] 37:23;  
 33 [1] 40:9;  
 34 [1] 40:19;  
 35 [1] 40:19;  
 35000 [1] 59:19;  
 350 [1] 29:9;  
 36 [3] 40:11; 54:25; 54:25;  
 37 [1] 25:7;  
 38 [4] 40:11; 41:8; 41:23; 42:8;  
 39 [5] 37:23; 40:18; 41:11; 41:23;  
 42:8;

## - 3RD -

3RD [8] 3:6; 3:15; 74:19; 74:21;  
 112:8; 112:16; 112:18; 119:7;

## - NUMBERS -

4/17/98 [1] 21:16;  
 40 [1] 40:3;  
 400 [1] 29:12;  
 450 [1] 29:12;  
 5/8/98 [1] 22:1;  
 50 [1] 18:19;  
 500 [2] 33:8; 33:9;  
 500-FOOT [1] 35:24;  
 53.8 [1] 23:10;  
 538.7 [1] 25:7;  
 5TH [3] 111:20; 111:25; 119:7;  
 6,000 [1] 8:4;  
 60 [5] 33:8; 86:16; 86:23; 92:13;  
 92:13;  
 60-SOME [1] 2:18;  
 6TH [1] 111:16;  
 700 [4] 24:14; 26:5; 33:18; 33:21;  
 700000 [1] 105:24;  
 72 [2] 20:11; 20:12;  
 75 [2] 18:19; 19:10;  
 771 [1] 25:15;  
 80 [1] 20:15;  
 82 [1] 21:8;  
 83 [1] 20:15;  
 84 [1] 20:15;  
 90 [2] 61:21; 78:25;  
 9:00 [1] 112:1;  
 9:30 [1] 111:15;  
 9TH [5] 21:13; 22:4; 24:8; 25:2;  
 25:23;

## - A -

A.M [7] 2:3; 111:9; 111:14;  
 111:15; 112:1; 112:3; 112:19;  
 ABANDONED [3] 48:10; 49:15;  
 49:18;  
 ABILITY [4] 27:9; 82:21; 89:14;  
 105:5;

ABLE [13] 2:25; 5:11; 13:19;  
 27:15; 29:9; 29:11; 36:21; 40:1;  
 40:2; 40:17; 43:20; 75:12; 96:2;  
 ABOVE [11] 33:1; 35:8; 38:23;  
 58:9; 78:12; 79:6; 79:20; 80:14;  
 80:15; 80:18; 92:7;  
 ABOVE-ENTITLED [1] 120:9;  
 ABSOLUTELY [1] 102:3;  
 ACCELERATE [1] 69:15;  
 ACCEPT [2] 87:2; 87:4;  
 ACCEPTABLE [4] 4:15; 87:17;  
 92:6; 101:7;  
 ACCESS [1] 61:5;  
 ACCOMMODATE [1] 114:21;  
 ACCUMULATION [1] 9:4;  
 ACCURATE [1] 36:14;  
 ACCUSES [1] 66:14;  
 ACHIEVED [1] 18:13;  
 ACRES [5] 27:4; 33:1; 33:2; 33:4;  
 36:2;  
 ACROSS [4] 19:8; 19:16; 44:16;  
 53:20;  
 ACTION [15] 9:14; 13:24; 14:7;  
 26:14; 30:5; 91:13; 91:14; 95:23;  
 95:23; 106:8; 106:17; 109:9;  
 109:18; 117:25; 118:2;  
 ACTUAL [4] 22:12; 33:20; 34:16;  
 46:17;  
 ACTUALITY [1] 87:5;  
 ACTUALLY [50] 3:16; 3:25;  
 4:22; 10:15; 13:11; 13:21; 16:11;  
 16:14; 18:23; 19:20; 21:14; 21:18;  
 22:1; 22:5; 22:11; 22:23; 22:25;  
 23:17; 28:3; 29:7; 39:23; 39:25;  
 46:2; 47:16; 48:9; 48:14; 49:7;  
 52:14; 53:6; 53:25; 59:7; 60:15;  
 60:18; 61:10; 61:17; 64:2; 66:24;  
 67:9; 74:8; 76:8; 77:5; 78:18; 79:1;  
 88:4; 88:5; 91:2; 96:1; 109:2;  
 109:21; 110:2;  
 AD [1] 48:22;  
 ADD [1] 30:9;  
 ADDED [1] 113:18;  
 ADDENDA [2] 37:11; 99:5;  
 ADDENDUMS [1] 99:2;  
 ADDITIONAL [4] 15:18; 37:1;  
 109:15; 111:11;  
 ADDRESS [2] 86:24; 95:17;  
 ADDRESSED [4] 51:11; 65:6;  
 114:24; 115:1;  
 ADJUDICATION [2] 101:24;  
 102:11;  
 ADMINISTER [1] 120:5;  
 ADMINISTRATIVE [11] 55:11;  
 103:2; 103:5; 103:9; 104:21;  
 104:22; 105:4; 105:17; 109:6;  
 109:16; 118:23;  
 ADVANCED [1] 8:13;  
 ADVERTISED [1] 75:3;  
 ADVICE [1] 3:12;  
 AERATION [1] 77:25;  
 AERO [1] 39:24;  
 AEROJET [3] 8:24; 15:5; 15:8;  
 AFFAIRS [2] 67:7; 72:6;  
 AFFECTIONATELY [1] 57:15;  
 AFRAID [1] 106:2;  
 AGAINST [1] 64:1;  
 AGENCIES [3] 31:6; 69:7; 118:8;

AGENCY [3] 71:3; 73:23; 74:23;  
 AGENCY'S [1] 73:11;  
 AGENDA [1] 2:9;  
 AGO [7] 37:18; 51:22; 60:2;  
 64:18; 79:19; 82:9; 98:24;  
 AGREE [9] 40:25; 43:9; 54:21;  
 64:14; 70:5; 95:16; 96:6; 97:20;  
 103:21;  
 AGREED [1] 26:10;  
 AGREEMENT [1] 13:9;  
 AHEAD [13] 2:8; 9:22; 14:11;  
 29:22; 31:12; 48:3; 53:2; 55:8;  
 58:25; 76:8; 111:4; 111:10; 116:12;  
 AIR [12] 30:6; 30:11; 30:12;  
 31:14; 33:20; 35:7; 35:18; 35:19;  
 91:6; 98:8; 99:10; 105:3;  
 ALBUQUERQUE [1] 35:2;  
 ALERTED [1] 89:12;  
 ALEX [10] 1:11; 4:18; 9:16;  
 51:25; 53:2; 56:6; 61:8; 61:15;  
 73:14; 93:5;  
 ALLOW [2] 27:6; 36:25;  
 ALMOST [7] 4:9; 14:25; 19:9;  
 35:1; 69:9; 70:1; 83:4;  
 ALONG [4] 46:5; 49:22; 57:21;  
 58:14;  
 ALTERNATIVE [1] 65:21;  
 ALTHOUGH [3] 30:13; 50:14;  
 83:8;  
 ALWAYS [2] 62:19; 79:21;  
 AMAZING [1] 25:24;  
 AMONG [2] 90:10; 90:11;  
 AMONGST [2] 31:6; 31:6;  
 AMOUNT [7] 7:7; 10:17; 19:12;  
 28:2; 28:19; 58:4; 83:1;  
 ANALYSES [1] 13:3;  
 ANALYSIS [2] 11:23; 20:20;  
 ANALYTICAL [2] 13:8; 56:10;  
 AND/OR [1] 6:5;  
 ANDY [1] 71:22;  
 ANECDOTAL [1] 46:9;  
 ANOMALOUS [2] 36:18; 97:23;  
 ANSWERED [1] 109:3;  
 ANTICIPATE [2] 3:14; 94:1;  
 ANTICIPATED [1] 93:18;  
 ANTICIPATING [4] 7:5; 7:16;  
 8:1; 94:2;  
 ANYBODY [3] 75:10; 98:21;  
 104:22;  
 ANYMORE [1] 72:2;  
 ANYONE [6] 14:12; 32:10; 59:1;  
 72:11; 74:15; 112:20;  
 ANYWAY [3] 10:11; 17:15; 67:1;  
 ANYWHERE [2] 18:14; 19:23;  
 APART [1] 38:4;  
 APPARENTLY [1] 82:25;  
 APPEAR [3] 2:20; 17:19; 75:16;  
 APPEARED [3] 37:11; 47:22; 49:7;  
 APPEARS [6] 8:23; 21:7; 35:9;  
 56:14; 57:12; 78:23;  
 APPLICABLE [2] 10:7; 99:11;  
 APPLICATION [1] 35:22;  
 APPLIED [5] 16:18; 18:16; 18:24;  
 18:25; 21:17;  
 APPLY [1] 100:9;  
 APPLYING [1] 25:19;  
 APPOINTED [1] 120:4;  
 APPRECIATE [2] 5:9; 119:14;

July 16, 1998

SKINNYSCRIPT

<p> <b>APPREHENSIVE</b> [1] 83:9;  <b>APPROACH</b> [3] 4:14; 30:1; 95:9;  <b>APPROPRIATE</b> [1] 99:12;  <b>APPROVAL</b> [1] 99:16;  <b>APPROVE</b> [3] 99:18; 103:2;  103:13;  <b>APPROVED</b> [2] 100:20; 100:24;  <b>APPROXIMATELY</b> [3] 93:11;  93:23; 112:5;  <b>APRIL</b> [2] 21:13; 107:13;  <b>AQMD</b> [2] 29:20; 31:3;  <b>AQUIFER</b> [23] 58:6; 76:19;  76:20; 76:21; 76:23; 76:24; 77:9;  77:11; 77:17; 77:20; 78:14; 78:15;  78:19; 79:2; 79:8; 80:13; 80:24;  81:6; 81:17; 81:24; 83:25; 116:16;  116:17;  <b>ARAR</b> [2] 102:17; 118:21;  <b>ARARS</b> [7] 89:22; 99:13; 99:15;  99:23; 99:24; 100:18; 101:15;  <b>AREA</b> [25] 32:16; 32:18; 32:18;  32:19; 32:22; 33:2; 33:4; 39:15;  39:16; 41:5; 42:3; 42:22; 43:18;  47:23; 50:23; 51:3; 54:16; 57:15;  57:19; 58:5; 60:1; 78:21; 80:11;  81:5; 116:14;  <b>AREAL</b> [1] 43:9;  <b>AREAS</b> [6] 44:3; 44:16; 46:13;  46:22; 79:11; 114:17;  <b>ARGUE</b> [2] 31:14; 64:1;  <b>ARGUING</b> [1] 30:18;  <b>ARGUMENT</b> [1] 28:22;  <b>ARIZONA</b> [1] 31:21;  <b>ARMY</b> [4] 48:25; 49:3; 49:3; 66:14;  <b>AROUND</b> [22] 2:7; 15:15; 19:7;  19:23; 19:25; 20:5; 20:8; 20:11;  20:15; 22:10; 22:20; 23:3; 40:19;  41:8; 41:9; 42:8; 47:14; 51:4;  58:24; 81:25; 106:8; 114:9;  <b>ARRANGEMENTS</b> [1] 8:8;  <b>ARROYO</b> [7] 9:12; 15:16; 57:18;  81:9; 82:12; 82:15; 83:5;  <b>ART</b> [2] 106:12; 106:14;  <b>ARTICLE</b> [10] 52:25; 59:4;  61:11; 62:21; 63:5; 63:10; 65:16;  68:10; 90:12; 106:12;  <b>ASIDE</b> [1] 105:18;  <b>ASK</b> [7] 10:20; 29:24; 41:22;  63:18; 69:1; 73:9; 100:3;  <b>ASKED</b> [4] 51:21; 66:22; 103:8;  115:6;  <b>ASKING</b> [3] 70:9; 71:14; 116:25;  <b>ASKS</b> [1] 99:15;  <b>ASSESSMENT</b> [5] 74:11; 86:8;  90:13; 90:24; 92:2;  <b>ASSESSOR</b> [1] 90:14;  <b>ASSIGN</b> [1] 91:13;  <b>ASSOCIATED</b> [3] 45:13; 59:20;  90:20;  <b>ASSUME</b> [2] 72:16; 80:5;  <b>ASSUMING</b> [1] 92:13;  <b>ASSUMPTION</b> [1] 34:8;  <b>ATSDR</b> [4] 74:10; 74:12; 108:12;  108:14;  <b>ATTEMPT</b> [1] 118:16;  <b>ATTENDEES</b> [1] 1:8;  <b>ATTENTION</b> [1] 23:13;  <b>ATTORNEY</b> [3] 104:4; 104:9;  104:12;  <b>ATTORNEYS</b> [2] 104:13; 118:25;  <b>ATTRIBUTED</b> [1] 61:7;  <b>ATWATER</b> [2] 106:18; 119:2;  <b>AUGUST</b> [9] 3:6; 74:19; 74:20;  74:21; 74:22; 109:22; 111:13;  111:14; 119:7;  <b>AUTHORIZED</b> [1] 120:5;  <b>AVAILABLE</b> [4] 12:24; 59:8;  75:3; 111:18;  <b>AVENUE</b> [3] 57:20; 77:14; 77:15;  <b>AVERAGE</b> [1] 19:8;  <b>AWARE</b> [6] 28:8; 67:5; 75:8;  75:19; 88:21; 106:5;  <b>AWAY</b> [14] 23:1; 23:11; 23:21;  24:13; 24:14; 24:16; 25:4; 25:6;  25:7; 25:15; 26:8; 36:24; 50:2; 59:13;  <b>AWFULLY</b> [2] 49:10; 88:8;  ===== </p>	<p> <b>- B -</b>  ===== </p>	<p> <b>B</b> [15] 18:25; 19:14; 19:15; 21:19;  21:21; 21:22; 22:19; 23:10; 24:1;  24:3; 24:24; 25:11; 25:12; 25:20;  60:16;  <b>B-1</b> [1] 24:16;  <b>B.G</b> [18] 1:17; 37:3; 39:4; 39:19;  40:25; 41:13; 42:18; 43:15; 44:18;  46:14; 47:19; 49:5; 55:7; 84:16;  84:21; 98:6; 116:25; 118:16;  <b>B.G.'S</b> [1] 45:13;  <b>BACK</b> [37] 13:3; 17:4; 17:11;  22:6; 22:7; 23:23; 24:5; 24:18;  24:21; 24:25; 25:3; 25:12; 25:16;  25:22; 25:23; 27:8; 34:8; 34:19;  40:14; 40:20; 45:3; 49:18; 53:3;  56:5; 67:9; 74:13; 78:1; 79:23;  82:2; 93:15; 96:25; 98:8; 102:15;  107:1; 108:12; 118:12; 118:22;  <b>BACKGROUND</b> [8] 3:13; 40:12;  40:19; 41:19; 41:22; 41:23; 41:25;  50:25;  <b>BACKSIDE</b> [1] 106:10;  <b>BACKUP</b> [1] 74:21;  <b>BACTERIA</b> [2] 8:16; 8:25;  <b>BAD</b> [6] 31:1; 32:7; 52:6; 52:8;  66:8; 93:3;  <b>BALDWIN</b> [4] 2:14; 4:18; 6:22;  17:17;  <b>BALLPARK</b> [1] 36:9;  <b>BAROMETRIC</b> [1] 42:16;  <b>BASE</b> [4] 26:25; 35:24; 36:14;  99:10;  <b>BASED</b> [22] 4:6; 7:19; 12:18;  17:19; 20:16; 20:20; 28:18; 36:4;  36:8; 36:17; 39:11; 40:25; 45:12;  54:9; 56:9; 57:10; 75:12; 89:2;  91:17; 95:7; 102:11; 117:8;  <b>BASELINE</b> [1] 21:12;  <b>BASICALLY</b> [38] 2:11; 2:22;  6:21; 7:16; 9:6; 10:1; 17:10; 17:12;  18:12; 19:21; 23:7; 27:5; 27:21;  28:6; 28:23; 30:3; 31:20; 33:2;  37:8; 44:1; 45:15; 46:23; 50:4;  50:6; 51:11; 53:17; 57:17; 58:3;  64:6; 75:13; 76:20; 77:18; 78:14;  82:16; 86:3; 93:7; 100:2; 110:11;  <b>BASIN</b> [11] 2:13; 51:20; 68:23;  72:18; 82:7; 82:18; 101:25; 102:2;  102:9; 102:10; 119:3;  <b>BASIS</b> [5] 3:2; 4:4; 8:3; 20:2; 63:9;  <b>BAT</b> [1] 10:12;  <b>BEACH</b> [1] 35:3;  <b>BEATING</b> [1] 63:15;  <b>BEAUTIFUL</b> [1] 100:22;  <b>BECOME</b> [2] 15:9; 82:24;  <b>BECOMES</b> [2] 26:12; 55:5;  <b>BEGIN</b> [2] 35:20; 39:25;  <b>BEGINNING</b> [2] 56:8; 94:10;  <b>BEHIND</b> [8] 34:11; 47:18; 49:22;  85:10; 92:25; 93:7; 96:11; 98:10;  <b>BEING</b> [16] 15:1; 16:18; 24:20;  26:23; 33:20; 42:24; 49:3; 56:12;  67:14; 72:11; 78:20; 83:1; 87:4;  97:17; 104:20; 107:4;  <b>BELIEVE</b> [10] 3:4; 33:6; 42:12;  46:10; 61:17; 61:18; 63:6; 81:19;  86:5; 97:7;  <b>BENEFIT</b> [1] 69:20;  <b>BESIDE</b> [1] 118:17;  <b>BEST</b> [6] 34:22; 34:23; 67:17;  70:12; 95:10; 95:12;  <b>BET</b> [2] 28:10; 35:25;  <b>BETTER</b> [5] 4:7; 17:14; 17:15;  38:6; 97:14;  <b>BETWEEN</b> [11] 18:14; 20:9;  27:22; 36:10; 44:7; 47:14; 57:16;  80:22; 87:11; 90:9; 98:22;  <b>BEYOND</b> [1] 40:10;  <b>BICOS</b> [2] 60:7; 60:8;  <b>BIG</b> [9] 2:16; 18:1; 30:21; 66:11;  68:25; 79:13; 80:21; 95:8; 103:3;  <b>BIGGER</b> [1] 39:13;  <b>BILLION</b> [7] 2:17; 16:10; 56:22;  58:1; 79:19; 82:16; 91:11;  <b>BIO</b> [1] 8:15;  <b>BIOMASS</b> [1] 9:4;  <b>BIT</b> [15] 18:6; 25:8; 34:12; 40:10;  41:1; 52:4; 52:19; 58:25; 78:8;  78:9; 78:15; 79:12; 80:14; 81:8;  81:25;  <b>BLAND</b> [1] 71:17;  <b>BLEED</b> [1] 66:6;  <b>BLOW</b> [1] 39:1;  <b>BLUE</b> [1] 18:25;  <b>BOARD</b> [20] 9:18; 12:5; 12:6;  19:16; 30:6; 30:6; 30:11; 30:12;  31:14; 68:6; 68:23; 72:5; 72:12;  72:15; 82:8; 82:18; 99:18; 100:25;  101:4; 114:3;  <b>BOB</b> [2] 62:3; 62:5;  <b>BOD</b> [4] 10:3; 10:3; 10:6; 10:8;  <b>BOGGED</b> [1] 69:6;  <b>BOILER</b> [1] 7:15;  <b>BORING</b> [1] 84:18;  <b>BORINGS</b> [1] 51:7;  <b>BOSS</b> [2] 62:2; 94:13;  <b>BOTH</b> [14] 6:4; 6:13; 20:15; 21:7;  25:12; 37:5; 51:25; 56:9; 61:8;  61:15; 66:15; 69:17; 86:16; 97:12;  <b>BOTTLED</b> [1] 4:11;  <b>BOTTOM</b> [6] 38:7; 38:22; 66:12;  76:23; 76:23; 105:4;  <b>BOUGHT</b> [2] 59:22; 60:1;  <b>BOUND</b> [1] 73:1;  <b>BOUNDARY</b> [2] 41:9; 46:6;  <b>BOXES</b> [1] 54:23;  <b>BREAK</b> [2] 8:17; 85:22;  <b>BREAKDOWN</b> [1] 79:5;  <b>BREATHING</b> [1] 83:7;  <b>BRICK</b> [4] 49:7; 49:24; 50:8; 50:10;  <b>BRIEFLY</b> [2] 37:12; 106:7;  <b>BRINE</b> [6] 7:25; 8:16; 8:18; 8:19;  9:2; 9:3;  <b>BRING</b> [2] 69:3; 112:20;  <b>BRINGING</b> [1] 27:23;  <b>BRINGS</b> [1] 66:13;  <b>BROUGHT</b> [2] 59:23; 75:7;  <b>BUILD</b> [2] 49:1; 49:4;  <b>BUILDING</b> [7] 45:17; 46:25;  47:19; 49:20; 49:22; 50:17; 50:18;  <b>BUILDINGS</b> [3] 45:11; 48:12; 50:9;  <b>BUILT</b> [2] 48:18; 50:6;  <b>BULL</b> [1] 90:13;  <b>BULLET</b> [1] 4:25;  <b>BUNCH</b> [2] 14:23; 61:4;  <b>BURIL</b> [278] 1:10; 2:5; 2:16; 3:25;  5:4; 5:7; 5:10; 5:16; 5:22; 5:24; 6:8;  6:11; 6:14; 6:18; 7:5; 7:13; 8:1; 8:7;  9:11; 9:15; 9:20; 9:24; 10:3; 10:8;  10:15; 10:24; 11:1; 11:5; 11:9;  11:12; 11:17; 11:20; 11:24; 12:7;  12:10; 12:12; 12:18; 13:2; 13:6;  13:15; 13:18; 14:1; 14:19; 14:25;  15:6; 15:24; 16:5; 16:11; 17:9;  17:19; 20:12; 21:10; 25:24; 26:5;  26:23; 27:13; 28:3; 28:11; 29:13;  29:16; 29:24; 30:8; 30:16; 30:19;  30:25; 31:2; 31:13; 31:16; 32:1;  32:6; 32:9; 32:15; 32:25; 33:2;  33:15; 34:3; 34:7; 34:25; 35:3;  35:9; 35:14; 35:19; 36:3; 36:12;  37:2; 38:8; 39:4; 39:9; 39:13;  39:21; 40:3; 40:6; 40:23; 41:15;  42:18; 43:13; 44:4; 45:6; 45:19;  45:22; 46:1; 46:5; 46:8; 46:19;  47:2; 47:4; 47:7; 47:12; 47:16;  47:21; 48:3; 48:6; 48:9; 48:12;  48:23; 49:5; 49:13; 49:17; 50:18;  50:21; 50:24; 51:6; 51:11; 51:16;  51:24; 52:4; 52:7; 52:10; 52:16;  53:6; 53:9; 54:4; 54:24; 55:2; 55:7;  55:16; 55:19; 55:23; 56:5; 58:21;  59:10; 59:25; 60:6; 60:8; 60:12;  60:18; 60:22; 60:24; 62:3; 62:5;  64:2; 64:14; 64:17; 64:23; 65:4;  66:10; 67:1; 67:4; 67:13; 67:22;  68:15; 68:20; 70:12; 71:8; 71:10;  71:19; 71:24; 72:4; 72:10; 72:21;  73:5; 73:9; 73:21; 73:24; 74:2;  74:7; 74:10; 76:8; 76:13; 76:25;  79:15; 79:23; 80:1; 80:17; 81:9;  81:14; 82:6; 82:11; 84:24; 85:8;  85:17; 86:2; 87:19; 87:25; 88:3;  88:5; 88:21; 89:11; 89:24; 90:7;  90:11; 90:16; 90:22; 91:10; 91:15;  91:23; 92:9; 92:16; 92:23; 93:19;  93:23; 94:5; 94:10; 94:15; 94:17;  94:20; 94:24; 95:20; 96:4; 96:6;  96:23; 97:8; 97:20; 98:6; 98:12;  98:17; 99:4; 100:13; 101:5; 101:20;  102:8; 102:19; 103:25; 105:18;  106:1; 106:13; 106:15; 106:22;  107:8; 108:9; 109:8; 109:18; 110:6; </p>
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SKINNYSCRIPT

BYPRODUCT [1] 79:5;

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- C -

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C [15] 19:1; 19:15; 19:15; 21:19;  
21:24; 21:25; 22:19; 24:1; 24:24;  
25:4; 25:11; 25:13; 25:20; 120:1;  
120:1;

CAKES [1] 98:19;

CAL [3] 66:14; 66:18; 67:6;

CALCULATE [1] 92:4;

CALCULATED [2] 18:3; 34:17;

CALCULATIONS [1] 33:22;

CALENDAR [1] 110:6;

CALENDARS [1] 109:22;

CALGON [17] 2:9; 2:11; 5:12;

5:16; 5:18; 8:20; 14:16; 15:2; 15:2;

15:14; 15:15; 15:16; 16:22; 32:3;

92:19; 95:5; 95:15;

CALGON'S [1] 93:1;

CALIFORNIA [5] 2:1; 14:6;

15:11; 103:9; 120:13;

CALL [12] 17:5; 18:10; 31:3; 51:5;

66:4; 73:1; 73:2; 73:17; 74:17;

75:22; 88:22; 91:14;

CALLED [2] 60:4; 104:9;

CALLS [5] 65:22; 70:7; 74:1; 75:9;

104:15;

CAME [9] 22:6; 50:24; 50:25;

56:8; 60:2; 67:10; 88:3; 88:7; 108:21;

CAMERON [1] 32:5;

CANCER [1] 90:20;

CANYON [2] 57:22; 58:11;

CAPABLE [2] 8:25; 29:7;

CARBON [20] 20:3; 20:11; 20:20;

20:21; 21:5; 21:5; 21:6; 31:18;

31:24; 40:12; 41:25; 42:2; 42:10;

44:9; 44:11; 55:13; 77:9; 77:11;

77:14; 77:17;

CARE [1] 87:8;

CAREFUL [1] 103:10;

CAREFULLY [1] 87:6;

CARES [1] 71:12;

CARLOS [17] 1:11; 8:6; 12:14;

30:11; 53:3; 53:7; 60:4; 60:9;

61:20; 63:4; 63:13; 70:25; 96:21;

97:16; 98:23; 99:2; 105:25;

CARRIED [1] 42:24;

CASE [7] 25:18; 63:17; 72:13;

72:16; 74:21; 78:24; 87:14;

CATCH [1] 5:20;

CAUSED [1] 52:18;

CAUSES [1] 12:19;

CAUSING [1] 104:16;

CCP [1] 120:5;

CELLS [1] 7:3;

CENTERED [1] 81:25;

CENTRALIZED [3] 42:5; 42:23;

43:6;

CERCLA [4] 9:14; 13:23; 14:8;

30:5;

CERTAIN [3] 53:12; 89:9; 93:25;

CERTAINLY [9] 14:20; 17:12;

61:10; 64:24; 67:4; 67:5; 89:4;

89:19; 103:19;

CERTIFIED [2] 120:4; 120:19;

CERTIFY [2] 120:3; 120:7;

CESSPOOL [4] 46:11; 46:20;

48:22; 49:4;

CESSPOOLS [5] 45:20; 45:24;

48:5; 48:7; 51:4;

CFM [5] 18:15; 29:8; 29:8; 29:9;

29:12;

CHANCE [2] 23:4; 75:15;

CHANCES [1] 26:23;

CHANGE [6] 7:3; 7:20; 75:13;

83:3; 87:23; 111:17;

CHANGED [2] 113:13; 116:22;

CHANGES [5] 38:5; 42:16;

59:24; 87:16; 91:3;

CHANNELS [1] 73:25;

CHARACTERIZATION [1]

41:16;

CHARACTERIZE [1] 39:9;

CHARLES [1] 1:10;

CHART [2] 98:17; 113:5;

CHECK [1] 108:20;

CHEMICAL [2] 43:18; 66:13;

CHEMICALS [3] 37:21; 45:3; 92:5;

CHEMISTRY [1] 7:12;

CHOICE [1] 112:8;

CHOSEN [1] 6:9;

CHRISTMAS [1] 88:12;

CHUCK [10] 5:2; 76:5; 76:7;

76:10; 76:12; 79:18; 99:10; 100:10;

102:25; 118:21;

CIRCLE [6] 32:20; 49:23; 49:24;

50:11; 53:13; 53:14;

CIRCULATION [5] 59:12;

59:17; 67:19; 68:20; 68:22;

CITY [7] 15:16; 57:20; 57:23;

58:10; 68:22; 81:10; 81:25;

CLAIMED [1] 95:3;

CLARITY [1] 55:4;

CLASSIC [1] 63:15;

CLEAN [3] 27:2; 50:20; 52:23;

CLEANING [1] 71:4;

CLEANUP [3] 66:13; 71:6; 95:2;

CLEANUP'S [1] 61:16;

CLEAR [3] 16:14; 39:3; 91:5;

CLOCK [1] 5:17;

CLOSE [14] 14:18; 26:20; 48:16;

49:10; 51:9; 84:15; 85:20; 88:3;

88:7; 88:8; 100:6; 104:20; 110:1;

114:12;

CLOSED [2] 106:9; 108:14;

CLOSER [1] 112:11;

CLOSEST [4] 77:7; 107:12;

107:15; 107:24;

CO-PLUMBED [1] 45:21;

COGNIZANT [1] 50:1;

COIN [1] 83:12;

COLLECTED [3] 20:24; 21:15;

117:18;

COLLECTING [2] 20:25; 21:2;

COLLEGE [1] 7:12;

COLORADO [1] 81:1;

COLUMN [1] 114:23;

COMBINED [1] 21:7;

COME [28] 4:5; 4:16; 8:9; 13:18;

14:5; 14:15; 14:21; 14:23; 61:3;

62:1; 62:16; 62:20; 63:9; 63:11;

63:24; 67:13; 67:13; 69:23; 74:22;

88:7; 100:16; 101:21; 105:5;

105:15; 113:15; 113:15; 114:12;

116:2;

COMES [11] 8:21; 12:21; 54:16;

57:17; 61:24; 62:22; 62:24; 69:19;

91:22; 101:16; 103:7;

COMING [18] 16:22; 20:17; 35:7;

51:17; 52:23; 56:15; 57:12; 57:14;

74:6; 75:8; 75:17; 81:20; 85:20;

86:4; 89:12; 89:16; 92:11; 116:7;

COMMENT [17] 63:2; 65:1;

65:22; 66:2; 74:18; 108:13; 113:2;

113:7; 113:8; 113:17; 114:3; 114:6;

114:7; 115:13; 115:14; 115:15;

117:5;

COMMENTS [22] 52:11; 66:24;

72:22; 74:3; 75:12; 77:7; 86:19;

86:24; 86:25; 88:23; 104:6; 104:19;

105:11; 108:12; 108:16; 112:25;

113:15; 113:20; 114:11; 114:16;

116:3; 119:10;

COMMINGLE [1] 81:22;

COMMINGLING [1] 78:6;

COMMITMENT [1] 94:13;

COMMITTEE [2] 63:7; 63:10;

COMMUNITY [7] 61:25; 62:25;

63:25; 69:3; 69:21; 70:2; 72:8;

COMPANIES [2] 14:24; 15:13;

COMPARE [5] 83:24; 84:2;

84:12; 90:21; 91:12;

COMPARED [1] 38:11;

COMPARISON [1] 37:25;

COMPLETE [1] 3:4;

COMPLETED [6] 37:5; 64:5;

64:7; 94:14; 96:3; 97:4;

COMPLETING [1] 75:18;

COMPLETION [1] 96:8;

COMPLICATED [2] 90:15; 90:17;

COMPOUNDS [1] 53:7;

CONCENTRATED [2] 7:24;

39:14;

CONCENTRATION [9] 6:19;

6:24; 22:16; 47:23; 56:2; 58:9;

80:18; 81:7; 85:12;

CONCENTRATIONS [26]

16:21; 16:23; 19:5; 19:8; 19:9;

19:15; 20:17; 20:18; 21:22; 22:1;

22:5; 22:7; 22:14; 37:20; 39:7;

40:21; 44:2; 44:7; 51:1; 56:13;

56:21; 58:2; 77:12; 82:13; 82:15;

82:20;

CONCEPT [2] 76:19; 85:9;

CONCERN [8] 10:9; 56:11;

62:11; 62:14; 82:21; 97:25; 104:17;

114:17;

CONCERNED [3] 69:20; 70:1;

82:19;

CONCERNS [2] 61:9; 116:9;

CONCLUSION [2] 57:11; 58:12;

CONCLUSIONS [1] 75:14;

CONCUR [1] 115:3;

CONCURRED [4] 115:8; 115:8;

115:15; 115:16;

CONDITION [3] 36:18; 40:16;

41:25;

CONDITIONS [3] 26:18; 35:2;

97:24;

CONDUCTIVITY [1] 4:9;

CONFIDENT [1] 49:9;

CONFIGURATIONS [1] 19:14;

CONFINING [3] 35:6; 35:10;

35:16;

CONFOUNDING [2] 90:23;

101:22;

CONFUSED [1] 48:4;

CONNECTION [1] 80:8;

CONSENSUS [1] 66:9;

CONSERVATIVE [3] 33:5; 34:7;

41:7;

CONSIDERATIONS [1] 72:6;

CONSISTENT [1] 38:10;

CONSTITUENTS [2] 11:22; 55:15;

CONSTRUCTED [2] 45:7; 48:21;

CONSTRUCTION [1] 48:19;

CONSULTANTS [1] 36:5;

CONTACT [2] 13:6; 73:20;

CONTACTED [1] 50:2;

CONTAINS [1] 37:18;

CONTAMINANT [2] 84:11; 84:12;

CONTAMINANTS [4] 37:19;

37:20; 84:2; 96:12;

CONTAMINATED [2] 50:22;

52:22;

CONTAMINATION [4] 32:22;

51:3; 57:25; 82:5;

CONTEXT [8] 52:12; 52:14;

61:14; 62:6; 63:3; 65:8; 66:9; 67:2;

CONTINUE [6] 26:17; 62:8;

73:15; 106:25; 113:16; 119:1;

CONTINUING [3] 31:5; 40:16;

70:15;

CONTINUITY [1] 73:10;

CONTINUOUS [2] 10:21; 20:2;

CONTINUOUSLY [1] 98:19;

CONTOUR [6] 53:4; 54:20;

54:21; 76:17; 78:2; 108:6;

CONTOURING [2] 53:19; 54:12;

CONTRACT [2] 2:10; 83:21;

CONTRACTS [1] 12:23;

CONTRACTUAL [2] 27:16; 28:12;

CONTRIBUTING [1] 44:21;

CONTROL [2] 59:14; 59:16;

CONVERSATION [1] 108:16;

CONVERSATIONS [1] 4:7;

CONVERTED [1] 51:13;

CONVINCED [1] 54:9;

COPIES [3] 5:13; 72:13; 76:11;

COPY [3] 9:8; 59:15; 99:10;

CORNER [1] 46:9;

CORRECTLY [5] 3:21; 82:14;

86:15; 89:23; 98:13;

COSTS [3] 15:22; 15:25; 16:5;

COUNCIL [1] 68:22;

COUNTERPARTS [1] 101:1;

COUNTRY [3] 15:10; 16:16; 96:14;

COUPLE [17] 29:23; 39:1; 43:24;

46:1; 65:19; 67:6; 69:14; 74:6;

74:12; 76:8; 76:23; 79:19; 82:6;

83:19; 85:2

July 16, 1998

SKINNYSCRIPT

CREATING [1] 57:9;  
 CRESCENTA [1] 120:13;  
 CRITERIA [1] 28:16;  
 CROSSROADS [1] 64:10;  
 CRUX [2] 66:11; 102:20;  
 CSR [2] 1:25; 120:3;  
 CUMULATIVE [1] 92:4;  
 CUMULATIVELY [1] 20:12;  
 CURIOUS [1] 116:13;  
 CURRENT [5] 3:19; 32:23;  
 85:15; 92:13; 116:13;  
 CURRENTLY [4] 3:17; 80:6;  
 89:6; 111:13;  
 CURVED [1] 50:10;  
 CUSTOMERS [2] 72:20; 82:22;  
 CUT [8] 8:18; 10:1; 12:5; 13:3;  
 28:9; 30:3; 34:8; 34:19;  
 CUTLER [26] 1:12; 26:22; 76:3;  
 76:9; 76:16; 77:4; 79:17; 79:25;  
 80:8; 80:21; 81:12; 81:15; 84:5;  
 84:15; 84:21; 84:25; 91:16; 92:18;  
 93:12; 93:21; 106:21; 107:11;  
 107:19; 107:24; 108:3; 117:21;  
 CWO [2] 27:23; 28:1;  
 =====

- D -

=====

DAILY [1] 8:3;  
 DALTON [2] 2:15; 2:16;  
 DAMN [1] 96:18;  
 DAN [1] 17:9;  
 DARK [1] 96:9;  
 DARN [1] 49:10;  
 DATA [37] 26:6; 32:25; 33:6;  
 36:15; 37:13; 39:11; 40:24; 53:4;  
 54:10; 54:11; 56:9; 57:10; 76:5;  
 76:10; 77:5; 77:7; 90:4; 91:22;  
 97:3; 97:21; 106:18; 107:5; 107:7;  
 107:14; 107:15; 107:17; 107:20;  
 107:22; 107:23; 107:25; 108:1;  
 108:6; 108:6; 117:18; 117:19;  
 117:19; 119:2;  
 DATE [7] 28:1; 86:5; 93:13; 94:4;  
 107:12; 118:19; 120:10;  
 DATED [1] 120:13;  
 DAY [13] 3:21; 3:24; 4:3; 8:5; 8:6;  
 8:7; 10:14; 20:2; 20:5; 110:16;  
 111:18; 112:7; 120:14;  
 DAYS [8] 19:8; 29:23; 74:12;  
 86:16; 86:23; 87:2; 87:4; 87:7;  
 DEAD [1] 61:16;  
 DEADLINE [3] 89:10; 94:19;  
 96:22;  
 DEAL [11] 17:25; 34:8; 58:15;  
 62:24; 87:10; 87:15; 96:13; 97:23;  
 100:21; 102:4; 102:11;  
 DEALING [6] 7:14; 31:4; 62:15;  
 64:23; 83:20; 96:12;  
 DEBBIE [1] 71:25;  
 DECADE [1] 52:22;  
 DECADES [1] 30:22;  
 DECENT [1] 26:7;  
 DECIDE [2] 95:6; 103:5;  
 DECIDED [3] 22:10; 22:25; 23:6;  
 DECISION [2] 97:17; 105:8;  
 DECISIONMAKING [1] 105:16;  
 DECISIONS [1] 95:22;  
 DECLINED [1] 61:4;

DECREASE [1] 82:13;  
 DECREASED [1] 81:7;  
 DEEP [1] 80:18;  
 DEEP-SOIL [1] 37:17;  
 DEEPER [4] 76:18; 78:11; 78:16;  
 81:25;  
 DEFEND [1] 61:12;  
 DEFERRED [2] 72:6; 72:15;  
 DEFINE [1] 78:3;  
 DEFINED [1] 22:21;  
 DEFINING [1] 57:5;  
 DEFINITELY [2] 88:24; 98:2;  
 DEGREE [2] 34:19; 69:16;  
 DELAY [2] 30:21; 93:6;  
 DELAYS [1] 31:11;  
 DELETES [1] 100:7;  
 DELIVERABLES [1] 86:2;  
 DELIVERED [1] 86:8;  
 DEMOLISHED [1] 48:13;  
 DEMONSTRATED [1] 23:17;  
 DEMONSTRATION [1] 50:9;  
 DENITRIFICATION [1] 16:1;  
 DEPENDING [7] 7:18; 13:2;  
 16:8; 36:21; 61:9; 89:1; 115:21;  
 DEPENDS [2] 32:16; 87:19;  
 DESCRIBE [1] 78:6;  
 DESCRIBED [3] 44:18; 45:1;  
 46:23;  
 DESIGN [5] 26:25; 28:16; 29:9;  
 54:17; 97:24;  
 DESIGNING [1] 36:17;  
 DESK [1] 65:10;  
 DETAIL [2] 55:12; 104:25;  
 DETAILED [2] 34:5; 49:1;  
 DETAILS [2] 44:24; 116:5;  
 DETECTED [8] 55:20; 55:24;  
 77:21; 79:3; 79:9; 79:10; 80:22;  
 80:25;  
 DETECTION [1] 77:18;  
 DETECTS [1] 11:21;  
 DETERMINE [2] 35:23; 99:13;  
 DETERMINED [1] 107:22;  
 DETERMINING [2] 41:4; 118:21;  
 DEVELOPED [2] 42:9; 75:4;  
 DEVELOPMENT [1] 116:21;  
 DIFFERENCE [3] 40:3; 40:4; 90:9;  
 DIFFERENCES [2] 29:3; 38:4;  
 DIFFERENT [15] 4:20; 12:22;  
 17:12; 23:8; 27:11; 43:25; 44:16;  
 44:16; 63:23; 73:16; 78:18; 92:5;  
 102:22; 115:10; 116:24;  
 DIFFICULT [6] 53:16; 53:21;  
 55:5; 87:14; 108:17; 114:14;  
 DILUTION [1] 83:2;  
 DIRECT [1] 80:7;  
 DIRECTION [7] 78:5; 78:17;  
 78:24; 79:2; 79:22; 80:16; 82:3;  
 DIRECTIONS [3] 78:5; 79:21;  
 80:2;  
 DIRECTLY [4] 4:1; 17:21; 75:23;  
 95:13;  
 DISAGREE [2] 66:22; 115:16;  
 DISCHARGE [10] 3:18; 3:20;  
 3:24; 9:12; 9:19; 10:19; 10:21;  
 13:23; 30:1; 118:10;  
 DISCHARGING [1] 4:1;  
 DISCOMFORT [1] 52:19;  
 DISCONNECT [1] 80:21;

DISCOVERY [2] 66:13; 104:12;  
 DISCUSS [1] 86:21;  
 DISCUSSED [4] 19:7; 26:10;  
 101:23; 116:19;  
 DISEASE [2] 68:12; 68:14;  
 DISGUST [1] 74:4;  
 DISPARITIES [1] 38:5;  
 DISPOSAL [1] 8:8;  
 DISPUTE [6] 87:5; 87:18; 87:23;  
 88:1; 116:1; 116:4;  
 DISTANCE [1] 24:13;  
 DISTANCES [1] 23:9;  
 DISTINCT [1] 23:15;  
 DISTINCTION [1] 44:6;  
 DISTRIBUTED [1] 75:21;  
 DISTRIBUTION [1] 44:12;  
 DIVIDE [2] 32:18; 33:8;  
 DOABLE [2] 94:20; 94:21;  
 DOCUMENT [9] 55:11; 86:25;  
 98:18; 104:16; 105:11; 105:19;  
 105:22; 112:12; 114:10;  
 DOCUMENTED [1] 56:18;  
 DOCUMENTS [3] 86:17; 105:12;  
 110:2;  
 DOD [1] 105:3;  
 DOGGONE [1] 28:17;  
 DOING [17] 2:12; 6:22; 10:9;  
 10:10; 17:9; 17:10; 22:24; 57:8;  
 62:12; 66:24; 68:24; 70:15; 91:15;  
 93:1; 93:2; 99:20; 101:6;  
 DOLLARS [1] 16:2;  
 DOMINQUEZ [1] 62:4;  
 DONE [36] 8:12; 22:13; 26:1;  
 37:5; 39:13; 39:14; 51:22; 51:22;  
 55:16; 70:17; 70:18; 70:22; 70:23;  
 87:19; 88:4; 88:5; 94:5; 95:6; 95:7;  
 95:25; 96:1; 96:17; 96:17; 96:18;  
 96:23; 99:6; 99:16; 103:11; 107:9;  
 109:10; 109:14; 113:12; 114:4;  
 114:5; 114:15; 117:24;  
 DOOR [3] 45:3; 89:13; 89:16;  
 DOSE [2] 91:1; 91:17;  
 DOUBT [2] 76:13; 91:4;  
 DOUBTS [1] 26:16;  
 DOWN [52] 5:4; 5:7; 8:17; 8:18;  
 12:21; 14:11; 16:10; 17:13; 23:16;  
 23:25; 24:7; 24:8; 24:9; 24:18;  
 24:22; 24:23; 24:25; 25:2; 25:3;  
 25:10; 25:17; 25:21; 25:22; 25:23;  
 27:7; 28:10; 30:3; 32:4; 40:1;  
 45:12; 49:20; 49:20; 50:2; 50:3;  
 50:17; 50:18; 53:14; 57:15; 57:18;  
 57:24; 69:6; 78:11; 80:7; 81:7;  
 81:20; 82:3; 85:17; 86:4; 92:11;  
 103:8; 109:20; 117:25;  
 DRAFT [23] 13:14; 64:8; 69:14;  
 74:10; 74:16; 74:17; 75:14; 75:21;  
 76:3; 76:6; 86:8; 86:25; 87:8;  
 87:17; 87:22; 112:24; 112:24;  
 112:24; 113:13; 113:14; 113:17;  
 117:21; 118:9;  
 DRAFTS [1] 105:11;  
 DRAIN [2] 50:5; 118:11;  
 DRAINS [5] 45:11; 45:12; 45:17;  
 45:25; 47:1;  
 DRAMATIC [1] 102:12;  
 DRAMATICALLY [2] 82:20;  
 83:10;

DRAW [4] 23:13; 53:13; 53:14;  
 113:5;  
 DRAWING [2] 35:15; 78:23;  
 DRAWN [1] 41:11;  
 DRINK [6] 52:23; 62:17; 63:20;  
 63:21; 68:7; 68:10;  
 DRINKING [4] 62:14; 62:19;  
 68:8; 100:6;  
 DRIVER [1] 29:16;  
 DROP [6] 21:18; 21:23; 21:25;  
 23:15; 23:18; 58:3;  
 DROPPED [8] 19:11; 19:12;  
 19:13; 24:9; 24:17; 24:22; 24:24;  
 25:3;  
 DROPS [5] 19:21; 26:17; 39:3;  
 83:10; 83:12;  
 DRY [7] 45:6; 45:14; 45:18;  
 45:25; 47:10; 48:5; 48:8;  
 DTSC [6] 1:13; 72:6; 72:11; 72:15;  
 100:25; 101:4;  
 DUE [1] 64:8;  
 DUG [1] 50:3;  
 DUMPED [1] 45:10;  
 DUPLICATE [1] 27:6;  
 DURING [5] 3:15; 11:1; 19:25;  
 38:18; 48:24;  
 =====

- E -

=====

E [2] 120:1; 120:1;  
 EACH [11] 2:6; 18:17; 18:18;  
 21:15; 53:5; 53:7; 53:8; 69:2; 71:1;  
 88:6; 98:16;  
 EARLIER [3] 24:19; 48:23; 55:25;  
 EARLY [3] 40:15; 49:18; 69:23;  
 EASIER [5] 30:15; 100:21;  
 100:23; 113:22; 116:1;  
 EASILY [4] 26:13; 75:9; 87:8; 94:5;  
 EAST [2] 41:10; 57:23;  
 EAST/WEST [1] 41:11;  
 EASTERN [1] 46:5;  
 EASY [3] 17:24; 36:12; 95:24;  
 ECONOMICALLY [1] 17:17;  
 EDGE [1] 41:24;  
 EDISON [1] 7:13;  
 EDITOR [1] 67:11;  
 EDWARDS [5] 99:10; 99:17;  
 99:22; 101:1; 103:7;  
 EFFECT [4] 19:13; 24:12; 27:7;  
 36:23;  
 EFFICIENCY [1] 7:19;  
 EFFLUENT [1] 17:25;  
 EFFORT [1] 44:6;  
 EFFORTS [2] 41:17; 119:14;  
 EITHER [14] 3:15; 5:13; 13:3;  
 15:8; 51:8; 53:24; 65:3; 74:19;  
 83:2; 85:21; 87:2; 87:4; 112:6; 112:8;  
 ELEVATED [1] 40:21;  
 ELOQUENTLY [1] 95:1;  
 EMPHASIZING [1] 62:11;  
 ENCOUNTERED [1] 84:16;  
 ENCOURAGE [3] 55:7; 61:6;  
 72:21;  
 END [14] 3:4; 7:25; 9:2; 9:5;  
 21:15; 22:4; 22:13; 87:13; 89:18;  
 94:10; 94:22; 97:1; 98:20; 104:3;  
 ENDED [2] 29:4; 29:6;  
 ENGINEERING [1] 36:19;

ENOUGH [8] 10:9; 25:20; 26:9;  
50:1; 74:2; 109:1; 109:23; 115:21;  
ENTHUSED [2] 16:22; 17:23;  
ENTIRE [8] 3:22; 27:3; 52:25;  
53:20; 75:18; 97:13; 105:20; 113:25;  
ENTIRELY [1] 109:12;  
ENTITIES [1] 15:1;  
ENTRANCE [1] 45:5;  
ENVIRONMENT [1] 46:12;  
EPA [19] 1:18; 17:10; 30:23;  
30:23; 70:2; 70:25; 71:3; 71:14;  
91:16; 91:17; 99:17; 100:25; 101:4;  
104:7; 104:24; 114:6; 114:6;  
115:14; 115:15;  
EPA'S [1] 61:23;  
EQUIPMENT [4] 4:21; 29:3;  
29:19; 93:2;  
ERROR [1] 7:13;  
ESPECIALLY [2] 55:9; 60:13;  
ESSENTIALLY [3] 28:20; 28:24;  
40:6;  
ESTABLISH [1] 28:17;  
ESTABLISHED [2] 91:1; 96:23;  
ESTIMATE [2] 32:14; 33:5;  
EVALUATION [2] 40:24; 41:3;  
EVEN [35] 9:17; 13:13; 16:9;  
21:8; 28:15; 28:17; 30:5; 30:11;  
30:12; 34:19; 40:11; 42:9; 50:8;  
51:22; 57:22; 59:7; 61:22; 63:5;  
65:11; 66:22; 67:8; 71:15; 82:2;  
82:21; 85:14; 90:14; 91:5; 91:13;  
92:1; 95:14; 106:11; 107:13;  
114:12; 114:13; 117:17;  
EVENT [6] 38:3; 38:17; 76:4;  
77:4; 77:6; 107:16;  
EVENTS [2] 38:14; 38:15;  
EVER [2] 34:23; 88:1;  
EVERY [8] 21:1; 49:10; 68:19;  
71:13; 101:15; 101:16; 105:22;  
110:19;  
EVERYBODY [6] 2:5; 4:15;  
62:19; 65:16; 86:3; 110:14;  
EVERYBODY'S [1] 80:23;  
EVERYONE [5] 2:5; 7:8; 59:3;  
89:17; 108:13;  
EVERYONE'S [3] 13:9; 83:7; 83:8;  
EVERYTHING [17] 4:5; 16:21;  
27:14; 36:14; 42:17; 63:3; 63:11;  
70:16; 71:17; 72:14; 91:3; 97:16;  
99:6; 103:10; 103:15; 105:9; 108:18;  
EVIDENT [1] 82:24;  
EXACT [1] 82:23;  
EXACTING [1] 48:18;  
EXACTLY [15] 4:20; 6:18; 16:2;  
16:17; 16:20; 26:4; 32:8; 50:6;  
56:15; 56:16; 69:25; 82:17; 109:1;  
115:18; 117:3;  
EXAMPLE [4] 21:16; 49:19; 53:5;  
59:12;  
EXCAVATION [3] 46:23; 46:24;  
50:16;  
EXCELLENT [2] 14:1; 14:1;  
EXCEPT [1] 97:18;  
EXCEPTION [3] 66:18; 82:12;  
83:5;  
EXCEPTIONAL [1] 36:7;  
EXCEPTIONALLY [1] 4:12;  
EXCESS [1] 82:15;

**EXCHANGE** [6] 7:8; 7:14; 14:22;  
 16:6; 72:24; 73:8;  
**EXCITING** [1] 8:11;  
**EXCUSE** [2] 8:4; 60:22;  
**EXHAUST** [1] 21:4;  
**EXHAUSTED** [3] 20:21; 20:22;  
 21:5;  
**EXHAUSTION** [2] 7:18; 7:22;  
**EXISTS** [1] 90:19;  
**EXPAND** [1] 44:5;  
**EXPANDED** [1] 44:13;  
**EXPECT** [4] 19:4; 20:5; 34:21;  
 80:20;  
**EXPECTED** [1] 83:11;  
**EXPECTING** [2] 3:5; 102:3;  
**EXPERIENCE** [3] 34:9; 36:5;  
 105:2;  
**EXPLAIN** [3] 59:5; 68:9; 113:1;  
**EXPLAINED** [1] 58:4;  
**EXPLANATION** [2] 115:17;  
 115:19;  
**EXTEND** [6] 22:11; 26:9; 40:22;  
 77:13; 81:8; 89:14;  
**EXTENDED** [7] 18:4; 26:11;  
 27:14; 32:9; 77:15; 97:11; 97:18;  
**EXTENDING** [1] 40:10;  
**EXTENDS** [2] 40:9; 78:22;  
**EXTENT** [8] 33:7; 39:10; 41:12;  
 43:9; 54:15; 58:22; 78:3; 108:7;  
**EXTRA** [1] 39:6;  
**EXTRACTION** [13] 18:5; 21:12;  
 22:6; 23:9; 25:25; 26:12; 32:10;  
 34:10; 36:24; 38:19; 39:17; 54:11;  
 58:22;  
**EXTRAPOLATE** [1] 68:13;  
**EXTREME** [1] 36:16;  
**EXTREMELY** [2] 79:11; 110:1;  
 =====  
 - F -  
 =====  
**F** [1] 120:1;  
**FACE** [2] 88:25; 88:25;  
**FACED** [1] 54:17;  
**FACILITIES** [4] 32:2; 49:25;  
 71:2; 87:21;  
**FACILITY** [1] 71:5;  
**FACT** [58] 2:22; 4:20; 5:17; 17:20;  
 21:23; 23:2; 23:3; 24:13; 25:9;  
 25:17; 34:18; 44:4; 49:5; 51:6;  
 51:25; 55:16; 56:14; 57:4; 57:14;  
 58:8; 59:14; 60:3; 63:4; 64:1; 64:2;  
 64:13; 64:16; 64:25; 65:6; 65:18;  
 65:19; 65:25; 66:2; 66:4; 67:9;  
 67:17; 67:18; 67:20; 67:24; 68:21;  
 69:5; 69:6; 70:10; 71:1; 71:5; 71:7;  
 71:14; 71:15; 73:10; 73:18; 76:14;  
 82:20; 82:23; 88:21; 89:12; 96:10;  
 96:14; 96:18;  
**FACTOR** [3] 62:13; 90:23; 98:2;  
**FACTORS** [1] 21:7;  
**FACTS** [3] 65:7; 68:17; 68:18;  
**FACTUAL** [2] 61:8; 65:7;  
**FAIRLY** [12] 17:23; 26:7; 26:24;  
 36:4; 44:8; 44:10; 48:18; 49:1;  
 54:7; 58:12; 102:12; 108:4;  
**FALL** [3] 17:3; 99:15; 112:6;  
**FAMILIAR** [6] 7:8; 8:8; 12:3;  
 12:4; 76:18; 88:7;

**FAMILIARITY** [1] 7:12;  
**FANTASY** [1] 26:5;  
**FARTHER** [2] 40:22; 78:11;  
**FAULT** [1] 41:10;  
**FAVORITE** [1] 80:23;  
**FEASIBILITY** [4] 95:4; 98:3;  
 98:14; 102:13;  
**FEBRUARY** [5] 94:9; 94:10;  
 94:11; 98:13; 107:16;  
**FEDERAL** [4] 71:2; 71:5; 87:21;  
 110:12;  
**FEEL** [5] 21:1; 49:8; 61:11; 96:16;  
 117:9;  
**FEET** [22] 22:20; 23:11; 24:14;  
 24:16; 25:4; 25:6; 25:7; 25:15;  
 26:3; 26:5; 28:15; 33:8; 33:9;  
 33:18; 33:21; 38:23; 40:4; 40:5;  
 50:16; 76:21; 76:22; 76:24;  
**FELLOW** [1] 101:1;  
**FELT** [1] 108:13;  
**FERMENTED** [1] 65:16;  
**FEW** [5] 2:19; 11:1; 52:18; 83:15;  
 89:4;  
**FFA** [4] 86:14; 86:15; 88:22; 89:13;  
**FIELD** [1] 36:11;  
**FIGHTING** [2] 30:19; 30:20;  
**FIGURE** [7] 7:21; 54:1; 73:24;  
 99:25; 100:17; 101:19; 114:21;  
**FIGURED** [2] 23:18; 100:1;  
**FILED** [1] 106:4;  
**FILL** [1] 3:23;  
**FILLED** [1] 65:14;  
**FILTER** [1] 31:21;  
**FINAL** [16] 13:16; 74:17; 86:25;  
 87:9; 87:9; 87:17; 87:22; 88:11;  
 105:10; 105:12; 112:24; 112:24;  
 112:25; 113:13; 113:17; 118:13;  
**FINALIZE** [1] 99:6;  
**FINALLY** [2] 74:13; 107:14;  
**FIND** [10] 17:13; 26:10; 40:17;  
 46:9; 46:14; 56:13; 57:2; 101:12;  
 117:7; 117:12;  
**FINDING** [1] 83:14;  
**FINE** [11] 12:1; 13:6; 31:17;  
 58:20; 73:21; 100:22; 101:3;  
 110:23; 110:25; 111:8; 116:9;  
**FINISH** [2] 2:12; 85:22;  
**FINISHED** [2] 22:2; 37:9;  
**FINISHED-OFF** [1] 27:23;  
**FINISHING** [1] 74:16;  
**FIRE** [1] 67:16;  
**FIRST** [29] 2:8; 6:24; 14:6; 18:7;  
 18:12; 18:18; 18:23; 20:21; 21:13;  
 23:9; 29:4; 37:15; 37:16; 37:17;  
 37:24; 38:1; 38:11; 43:22; 61:15;  
 73:2; 77:4; 77:14; 94:1; 94:7; 97:4;  
 97:10; 104:21; 110:24; 113:14;  
**FIT** [2] 71:7; 84:25;  
**FIVE** [7] 36:1; 36:10; 38:24;  
 62:23; 106:5; 111:2; 116:4;  
**FIVE-WEEK** [1] 93:6;  
**FIXED** [2] 14:17; 14:18;  
**FLAT** [1] 53:17;  
**FLINTRIDGE** [1] 57:17;  
**FLOODED** [1] 38:24;  
**FLOOR** [1] 45:12;  
**FLORES** [1] 80:5;  
**FLOW** [22] 8:2; 10:3; 18:12;

18:14; 18:18; 18:22; 19:3; 19:5;  
 19:11; 19:12; 19:22; 33:19; 34:1;  
 34:16; 78:5; 78:17; 79:1; 79:21;  
 80:2; 80:4; 80:14; 82:2;  
**FLOWED** [1] 105:16;  
**FLOWES** [3] 56:16; 80:15; 83:3;  
**FLYING** [1] 5:18;  
**FOCUS** [1] 73:22;  
**FOCUSED** [1] 44:17;  
**FOLKS** [33] 12:16; 17:10; 25:24;  
 29:25; 31:4; 49:25; 52:19; 59:7;  
 59:17; 61:3; 61:12; 61:17; 64:8;  
 67:1; 67:5; 67:7; 67:7; 69:3; 69:15;  
 70:2; 70:9; 70:21; 71:25; 72:10;  
 72:21; 74:24; 75:8; 77:1; 86:15;  
 87:11; 99:17; 102:2; 110:2;  
**FOLLOW** [4] 80:19; 88:24;  
 109:24; 113:4;  
**FOLLOWING** [1] 112:5;  
**FOOLS** [2] 52:9; 52:10;  
**FOOTHILL** [1] 57:16;  
**FORCE** [3] 91:6; 99:10; 105:4;  
**FORCES** [1] 91:7;  
**FOREGOING** [1] 120:7;  
**FORGET** [1] 44:24;  
**FORGOTTEN** [1] 109:11;  
**FORM** [2] 4:23; 86:20;  
**FORMAL** [3] 13:15; 55:9; 72:14;  
**FORMALIZED** [1] 95:24;  
**FORMALLY** [1] 104:11;  
**FORMAT** [2] 29:20; 114:13;  
**FORTH** [16] 15:25; 28:8; 45:12;  
 46:13; 48:21; 51:7; 54:5; 54:19;  
 56:25; 57:20; 58:7; 68:24; 69:4;  
 87:20; 89:14; 98:8;  
**FORTUNATELY** [1] 49:25;  
**FOSTER** [5] 1:12; 1:14; 1:17; 3:9;  
 27:14;  
**FOUND** [9] 49:19; 49:24; 50:3;  
 63:17; 83:24; 85:11; 101:6; 116:17;  
 117:6;  
**FOUR** [9] 19:8; 19:14; 27:9;  
 34:21; 35:25; 37:17; 37:24; 38:9;  
 101:14;  
**FOURTH** [1] 22:2;  
**FRAME** [8] 17:3; 28:5; 29:18;  
 49:19; 107:8; 109:25; 110:11; 112:6;  
**FREE** [1] 59:6;  
**FREON** [2] 20:3; 20:11;  
**FREQUENCY** [2] 11:24; 89:7;  
**FRIENDS** [1] 94:25;  
**FRONT** [3] 15:3; 52:21; 93:24;  
**FS** [6] 92:15; 92:18; 95:14; 95:17;  
 96:2; 118:19;  
**FSAP** [1] 37:11;  
**FUEL** [1] 67:15;  
**FULFILLS** [1] 105:16;  
**FULL** [4] 10:14; 10:18; 27:10; 69:9;  
**FUNDING** [1] 12:24;  
**FUNNEL** [1] 57:16;  
**FUNNY** [1] 49:23;  
**FURTHER** [7] 22:11; 23:1; 23:6;  
 53:13; 57:22; 57:23; 120:7;  
**FUTURE** [2] 112:23; 117:12;  
 =====  
 - G -  
 =====  
**GABRIEL** [6] 2:13; 4:6; 16:25;

July 16, 1998

SKINNYSCRIPT

GALLONS [3] 8:4; 8:4; 8:5; GANTT [1] 98:17; GAS [4] 37:4; 42:6; 43:11; 53:3; GAUGES [1] 60:10; GCMS [1] 12:13; GEBERT [48] 1:13; 5:2; 5:6; 5:9; 5:15; 5:21; 5:23; 6:9; 7:11; 9:10; 22:8; 28:22; 28:25; 36:8; 39:19; 39:22; 43:14; 43:17; 45:20; 55:24; 56:3; 64:15; 65:17; 65:21; 65:24; 68:17; 72:7; 72:25; 73:6; 73:19; 73:23; 73:25; 86:1; 88:1; 88:4; 91:24; 94:13; 94:16; 94:19; 97:14; 98:10; 101:16; 102:17; 110:16; 110:19; 110:23; 110:25; 112:15; GEE [1] 102:1; GENERAL [5] 40:16; 42:10; 66:20; 74:3; 81:5; GENERATE [2] 70:16; 86:24; GENERATED [3] 8:19; 78:20; 107:25; GENERATING [1] 98:1; GENERATION [1] 8:2; GENERATOR [1] 82:25; GETS [5] 9:4; 86:18; 92:20; 106:2; 118:11; GETTING [15] 3:7; 3:13; 17:1; 26:20; 29:4; 30:2; 33:25; 75:9; 81:22; 86:10; 89:11; 90:25; 93:4; 104:15; 118:5; GIS [1] 54:5; GIVE [16] 5:6; 18:7; 27:19; 32:14; 38:6; 48:25; 61:11; 64:25; 75:22; 99:22; 102:25; 102:25; 103:17; 103:19; 110:7; 113:8; GIVEN [5] 29:25; 50:10; 62:19; 73:11; 118:9; GIVES [6] 10:11; 37:25; 38:14; 45:9; 59:13; 86:15; GIVING [3] 67:15; 71:15; 97:19; GLAD [3] 15:19; 68:25; 85:18; GO-AHEAD [1] 27:20; GOAL [2] 90:24; 94:22; GOES [9] 6:2; 25:3; 86:22; 56:5; 71:19; 74:17; 100:7; 102:7; 107:21; GONE [5] 4:10; 4:10; 22:7; 28:7; 83:4; GOOD [21] 3:12; 4:12; 14:10; 23:11; 28:13; 28:17; 31:5; 36:19; 52:6; 52:8; 52:17; 60:14; 68:1; 73:5; 74:2; 77:6; 89:15; 94:25; 96:18; 98:21; 116:8; GOTTEN [4] 27:14; 76:2; 106:23; 109:4; GRADIENT [2] 78:11; 82:4; GRAPH [3] 18:21; 28:14; 23:22; GRAPHS [1] 23:7; GREASE [1] 10:5; GREAT [12] 9:24; 11:20; 12:10; 13:10; 17:25; 34:8; 37:2; 66:18; 82:24; 104:17; 106:12; 106:14; GREATER [3] 7:6; 58:10; 82:21; GREATEST [2] 69:16; 69:19; GREEK [1] 14:22; GRID [1] 43:6; GRIND [1] 27:18; GROUND [3] 4:8; 38:23; 42:8; GROUNDWATER [32] 3:11;	38:24; 42:16; 42:18; 42:24; 42:25; 44:7; 44:19; 44:20; 47:10; 53:17; 55:17; 56:10; 56:24; 57:3; 57:6; 57:19; 60:11; 64:6; 76:1; 83:3; 83:17; 84:6; 84:13; 84:23; 85:1; 85:16; 86:9; 86:11; 88:10; 90:3; 119:2; GROUPING [1] 43:23; GROVE [1] 57:18; GUESS [13] 10:19; 32:23; 36:9; 41:22; 51:19; 72:1; 74:8; 74:16; 91:16; 97:9; 104:22; 107:5; 112:23; GUILTY [1] 63:17; GUN [1] 53:1; GUY [1] 104:5; GUYS [7] 63:2; 70:25; 71:3; 71:14; 101:9; 103:2; 118:5; ===== - H - ===== ===== HALF [7] 8:2; 8:5; 13:12; 33:24; 36:15; 56:20; 97:4; HALT [3] 61:16; 66:14; 95:3; HAND [1] 88:18; HANDLE [4] 7:2; 12:24; 101:17; 102:6; HANDS [4] 2:23; 13:17; 28:13; 83:19; HAPPEN [4] 13:9; 83:11; 87:13; 91:4; HAPPENED [3] 15:4; 82:23; 106:6; HAPPENS [2] 83:9; 91:2; HAPPY [4] 9:6; 9:9; 50:21; 65:2; HARD [2] 17:21; 17:21; HATE [1] 106:12; HAVING [8] 14:18; 17:20; 28:3; 40:18; 86:19; 93:24; 96:17; 97:1; HAZARDOUS [1] 100:4; HEAD [2] 33:10; 92:17; HEADING [2] 78:5; 78:24; HEADLINE [1] 63:19; HEADS [2] 86:3; 89:16; HEALTH [3] 62:12; 62:13; 74:10; HEARD [1] 56:6; HEART [3] 39:18; 40:8; 40:20; HEARTBURN [2] 10:12; 12:19; HECK [2] 46:15; 105:6; HELP [4] 37:12; 38:5; 78:3; 108:7; HELPING [1] 14:3; HENDERSON [4] 14:16; 17:5; 90:25; 91:5; HERE'S [8] 52:21; 66:4; 78:10; 78:16; 80:10; 80:24; 81:6; 81:24; HEREBY [1] 120:3; HEY [3] 14:17; 49:23; 116:4; HIDE [1] 55:12; HIGH [15] 16:23; 20:22; 23:5; 23:24; 26:20; 34:14; 35:5; 36:18; 44:8; 44:10; 53:12; 83:25; 84:16; 84:19; 116:17; HIGHER [10] 18:16; 20:19; 21:5; 21:9; 35:18; 35:19; 44:3; 85:4; 85:5; 85:15; HIGHEST [6] 6:5; 6:5; 6:11; 47:23; 84:18; 85:3; HILLS [2] 57:16; 57:17; HINGE [1] 95:4; HIRED [1] 15:4;	HISTORIC [1] 26:19; HIT [3] 49:7; 49:9; 80:9; HITS [2] 38:10; 75:2; HOC [1] 48:22; HODGKIN'S [1] 68:11; HODGKINS'S [1] 68:13; HOLD [3] 5:16; 96:25; 103:14; HOLDING [1] 50:4; HOLES [2] 38:21; 39:5; HOLIDAY [1] 110:12; HONESTLY [2] 56:23; 59:11; HOPE [3] 89:24; 92:9; 106:9; HOPEFUL [5] 4:21; 4:25; 8:25; 87:6; 114:11; HOPEFULLY [2] 31:16; 36:25; HOPING [1] 38:25; HORIZONTAL [1] 53:20; HORRENDOUSLY [1] 87:10; HOSANGADI [28] 1:14; 18:9; 20:14; 21:11; 22:9; 26:4; 27:5; 27:25; 28:6; 28:24; 29:2; 29:15; 29:19; 31:20; 31:24; 32:5; 32:8; 32:16; 33:22; 34:2; 34:23; 35:1; 36:2; 36:20; 60:15; 60:21; 60:23; 97:7; HOT [2] 15:12; 98:19; HOUR [3] 19:24; 19:24; 20:1; HOURS [4] 21:1; 21:1; 23:16; 27:8; HOUSE [3] 68:19; 74:14; 76:6; HOWEVER [2] 36:4; 57:13; HUGE [2] 4:2; 4:2; HUMAN [2] 62:11; 62:13; HUNDRED [4] 32:15; 33:1; 56:21; 76:24; HURDLE [1] 14:2; ===== - I - ===== ===== I'S [1] 115:13; I.G [4] 66:17; 66:19; 66:21; 66:22; IDEA [7] 11:20; 37:13; 38:14; 70:11; 114:22; 115:12; 116:13; IDEAL [4] 35:1; 35:1; 35:4; 35:22; IDENTIFIED [2] 51:21; 60:19; IGNORE [1] 95:11; ILLUSTRATIVE [1] 54:12; IMAGINE [1] 90:2; IMMEDIATE [2] 84:3; 84:13; IMMEDIATELY [3] 26:15; 31:11; 104:9; IMPACTED [1] 25:18; IMPACTS [1] 102:13; IMPLEMENT [3] 4:23; 26:15; 27:15; IMPLEMENTABLE [1] 26:13; IMPORTANT [1] 24:10; IMPOSED [1] 86:14; IMPROVE [1] 77:2; INAPPROPRIATE [1] 100:8; INCH [2] 33:19; 33:24; INCLUDE [4] 9:21; 12:9; 77:16; 102:21; INCLUDED [5] 9:18; 37:10; 63:5; 107:6; 117:22; INCORPORATE [1] 108:17; INCORPORATED [5] 108:15; 115:2; 115:2; 115:9; 115:9; INCORRECT [1] 66:16;	INCREASE [7] 6:21; 7:2; 7:17; 11:24; 13:3; 21:24; 89:7; INCREDIBLE [1] 49:5; INDEED [2] 25:12; 26:10; INDICATE [2] 28:18; 56:14; INDICATED [1] 4:7; INDICATING [1] 33:3; INDICATION [1] 45:9; INDICATIONS [1] 17:16; INDIFFERENT [2] 52:6; 52:8; INDIVIDUALLY [1] 53:21; INDIVIDUALS [1] 63:10; INDUSTRY [1] 26:2; INFLAMMATORY [1] 66:16; INFLEXIBLE [1] 87:25; INFLUENCE [12] 22:21; 26:12; 32:19; 32:24; 33:10; 33:18; 33:21; 34:20; 35:24; 78:22; 102:10; 102:16; INFLUX [2] 82:24; 105:21; INFORMALLY [1] 92:22; INFORMATION [18] 5:2; 8:23; 9:7; 17:11; 19:19; 29:21; 37:1; 37:12; 40:13; 46:9; 54:13; 63:13; 66:3; 72:19; 82:14; 89:2; 97:23; 107:2; INITIAL [3] 18:11; 75:14; 75:21; INITIATE [1] 8:15; INJECT [1] 81:1; INJECTED [1] 81:18; INSPECTOR [1] 66:19; INSTALLATION [1] 99:11; INSTANCE [1] 107:19; INSTANCES [2] 34:22; 56:18; INSTEAD [1] 54:25; INSTRUCTIONS [1] 49:1; INTENTIONALLY [1] 96:24; INTENTS [2] 41:2; 41:4; INTERCHANGE [1] 89:2; INTEREST [2] 31:5; 57:21; INTERESTED [3] 28:14; 59:3; 118:5; INTERESTING [9] 17:3; 22:22; 55:23; 56:5; 59:4; 60:24; 60:25; 80:17; 101:20; INTERESTINGLY [1] 109:23; INTERNAL [1] 104:23; INTERNALLY [2] 64:3; 103:17; INTERVIEWED [1] 60:5; INTRODUCTION [1] 46:11; INTRODUCTIONS [1] 2:6; INUNDATING [1] 58:5; INVESTIGATION [4] 45:1; 47:25; 64:6; 86:11; INVITATION [1] 4:16; INVOKE [2] 87:5; 87:23; INVOKED [1] 88:1; INVOLVED [6] 15:5; 15:6; 56:7; 65:12; 72:2; 72:11; ION [3] 7:8; 14:22; 16:6; IRRELEVANT [1] 12:11; ISEP [3] 3:16; 3:20; 16:14; ISSUE [14] 13:14; 15:7; 15:10; 17:2; 34:3; 62:10; 62:13; 65:13; 68:10; 68:11; 68:12; 68:16; 71:4; 104:17; ISSUED [1] 64:15; ISSUES [4] 56:25; 65:20; 66:11; 88:20;
---	--	---	---



July 16, 1998

SKINNYSCRIPT

ISSUING [2] 13:11; 65:18;  
ITEM [3] 86:1; 108:14; 109:9;  
ITEMS [7] 99:9; 105:14; 106:8;  
106:17; 109:18; 118:1; 118:2;  
=====

- J -

=====

JAMES [2] 71:12; 71:12;  
JANUARY [2] 94:10; 107:16;  
JOB [3] 49:6; 96:19; 100:23;  
JOHN [1] 105:5;  
JPL [21] 1:10; 1:16; 4:19; 8:13;  
27:17; 52:22; 56:16; 57:11; 57:17;  
59:14; 59:16; 61:4; 66:13; 80:19;  
107:25; 111:8; 113:8; 114:3; 114:6;  
114:7; 119:5;  
JPL/NASA [3] 74:25; 115:14;  
115:15;  
JR [3] 1:19; 1:25; 120:3;  
JUDGEMENT [1] 36:19;  
JUDICIAL [1] 104:12;  
JUDITH [1] 1:16;  
JUDY [1] 117:25;  
JULY [3] 1:5; 2:2; 120:14;  
JUMP [3] 2:8; 14:20; 53:1;  
JUMPED [1] 15:18;  
JUNCTURE [2] 91:2; 117:14;  
JUNE [4] 22:4; 24:8; 25:2; 94:14;  
=====

- K -

=====

KAREN [1] 60:7;  
KEEP [3] 27:9; 95:11; 95:11;  
KEEPING [1] 82:3;  
KEPT [1] 62:10;  
KEY [7] 63:23; 94:24; 95:8; 97:1;  
101:10; 105:13; 115:5;  
KIND [74] 2:24; 2:25; 3:12; 4:12;  
4:16; 4:24; 7:22; 7:24; 15:2; 15:12;  
15:14; 15:21; 16:11; 17:1; 18:7;  
22:9; 22:15; 24:18; 26:11; 26:13;  
28:6; 29:25; 31:9; 32:12; 32:16;  
35:6; 37:13; 37:25; 38:5; 38:13;  
41:19; 41:21; 41:24; 42:2; 42:5;  
42:6; 44:12; 44:18; 44:23; 44:24;  
44:25; 45:4; 46:11; 46:24; 47:11;  
47:14; 48:6; 50:1; 51:19; 52:12;  
59:10; 60:24; 66:10; 70:7; 71:20;  
72:18; 79:10; 81:16; 81:22; 85:18;  
92:21; 95:11; 96:24; 98:4; 100:4;  
100:5; 102:1; 102:1; 102:7; 102:19;  
102:22; 109:4; 109:6; 111:19;  
KNOCKING [1] 9:1;  
KNOWING [2] 41:16; 116:8;  
KNOWLEDGE [2] 8:12; 61:3;  
KNOWN [1] 15:15;  
=====

- L -

=====

L [1] 1:10;  
LA [2] 59:20; 60:2;  
LA [1] 120:13;  
LAB [16] 6:4; 12:23; 21:3; 40:17;  
40:20; 42:1; 42:9; 42:10; 42:13;  
42:14; 44:18; 45:4; 45:9; 49:21;  
57:5; 58:9;  
LABOR [1] 112:7;  
LABORATORY [1] 1:4;

LADY [1] 71:24;  
LAG [5] 93:10; 93:14; 93:23; 94:6;  
94:7;  
LAND [1] 109:25;  
LARGE [1] 9:1;  
LARGER [1] 67:18;  
LARGEST [1] 41:6;  
LAST [22] 14:2; 19:7; 22:14; 23:3;  
25:14; 37:18; 44:23; 48:1; 57:6;  
64:15; 64:17; 69:8; 74:12; 76:4;  
77:8; 85:22; 92:21; 106:8; 108:19;  
109:19; 114:9; 116:19;  
LATE [1] 28:5;  
LATER [5] 10:6; 11:7; 11:14;  
22:6; 114:8;  
LATEST [4] 37:6; 76:1; 97:2; 97:3;  
LAWSUITS [4] 62:23; 100:17;  
103:15; 106:3;  
LAWYER [2] 89:21; 89:21;  
LAYER [21] 35:6; 35:16; 76:19;  
76:21; 76:22; 76:23; 77:9; 77:11;  
77:18; 77:20; 78:10; 78:14; 78:15;  
79:8; 79:8; 80:10; 80:13; 80:24;  
81:7; 81:24; 98:18;  
LAYERS [3] 76:20; 78:19; 79:2;  
LEAD [2] 71:3; 71:6;  
LEADERS [1] 96:14;  
LEADS [1] 58:12;  
LEAST [11] 25:5; 35:9; 56:12;  
57:2; 59:5; 66:8; 75:4; 89:5; 91:12;  
95:17; 119:14;  
LEAVE [3] 14:12; 75:13; 99:24;  
LED [2] 46:10; 74:13;  
LEFT [5] 5:20; 36:11; 60:16;  
60:17; 100:18;  
LEFT-HAND [1] 46:8;  
LEG [1] 101:19;  
LEGAL [3] 67:7; 103:18; 105:3;  
LEGALLY [1] 30:9;  
LEND [1] 54:13;  
LENGTH [2] 28:9; 54:6;  
LESS [8] 6:17; 7:11; 20:13; 32:15;  
33:19; 39:13; 54:9; 89:5;  
LESTER [2] 1:25; 120:3;  
LETTER [7] 9:18; 13:11; 13:15;  
13:16; 13:21; 67:11; 118:10;  
LETTING [1] 64:10;  
LEVEL [15] 15:5; 16:9; 24:6;  
25:1; 40:12; 40:19; 42:19; 72:5;  
80:9; 91:13; 91:14; 91:20; 91:21;  
100:6; 104:21;  
LEVELS [28] 6:6; 20:4; 20:22;  
24:21; 53:18; 77:18; 77:23; 79:11;  
80:11; 80:15; 81:3; 83:23; 84:1;  
84:2; 84:12; 84:16; 84:18; 84:19;  
84:22; 84:23; 85:3; 85:3; 85:4;  
85:4; 85:5; 85:5; 85:6; 100:5;  
LIE [1] 26:6;  
LIFE [2] 65:25; 104:7;  
LIGHT [1] 104:3;  
LIKED [2] 60:12; 60:12;  
LIKELY [2] 47:10; 67:22;  
LIMIT [2] 77:19; 82:16;  
LIMITATIONS [1] 29:5;  
LINCOLN [3] 57:20; 77:14; 77:15;  
LINE [9] 16:1; 41:7; 41:8; 41:11;  
64:22; 78:12; 81:10; 81:17; 105:4;  
LINER [1] 49:8;

LINN [2] 1:25; 120:3;  
LIST [4] 91:9; 99:14; 108:11;  
118:24;  
LISTED [4] 37:22; 38:9; 89:23;  
113:3;  
LITERALLY [1] 29:23;  
LITERATURE [2] 5:3; 118:3;  
LITTLE [28] 2:17; 10:8; 18:6;  
18:8; 20:9; 20:13; 25:8; 34:12;  
37:3; 40:9; 40:24; 41:1; 49:23;  
52:4; 52:19; 54:23; 58:24; 76:7;  
78:1; 78:8; 78:9; 78:11; 78:15;  
79:12; 80:13; 81:8; 81:25; 112:11;  
LOCAL [1] 52:22;  
LOCATE [2] 46:1; 48:14;  
LOCATED [2] 39:23; 43:5;  
LOCATING [1] 49:6;  
LOCATION [4] 36:24; 37:14;  
40:6; 49:10;  
LOCATIONS [6] 6:3; 16:16; 26:1;  
49:7; 56:17; 111:6;  
LONG [6] 6:2; 11:16; 30:14;  
69:11; 99:19; 114:11;  
LONG-TERM [1] 22:3;  
LONGER [2] 92:12; 96:9;  
LONGER-TERM [1] 34:5;  
LOOK [42] 9:23; 12:8; 16:23;  
19:7; 20:15; 23:4; 24:3; 24:16;  
24:17; 24:24; 25:2; 25:8; 25:10;  
25:14; 25:15; 25:20; 36:22; 37:12;  
41:1; 43:14; 43:17; 43:22; 46:2;  
47:17; 52:17; 55:8; 57:14; 64:25;  
70:13; 75:15; 80:2; 85:10; 90:14;  
97:25; 100:10; 101:9; 103:4;  
103:13; 104:23; 105:14; 114:19;  
119:9;  
LOOKED [4] 50:3; 53:20; 76:12;  
103:17;  
LOOKING [15] 5:17; 12:12;  
14:15; 15:7; 23:19; 27:21; 30:2;  
39:4; 47:18; 56:23; 59:23; 62:7;  
90:2; 106:11; 110:10;  
LOOKS [9] 12:12; 12:22; 25:8;  
85:11; 88:9; 89:21; 100:19; 103:1;  
103:12;  
LOS [1] 80:5;  
LOTS [1] 98:22;  
LOW [14] 16:10; 16:25; 20:4;  
40:15; 56:1; 77:18; 77:23; 79:4;  
79:11; 80:9; 80:11; 81:3; 84:22;  
84:23;  
LOWER [6] 4:9; 6:19; 28:25;  
29:11; 77:12; 79:2;  
LOWERING [1] 42:19;  
LUNCH [2] 85:21; 85:22;  
=====

- M -

=====

MAGNETIC [1] 60:10;  
MAGNETICS [1] 60:13;  
MAIL [2] 74:13; 75:13;  
MAIN [1] 104:17;  
MAINTAIN [1] 17:25;  
MAJOR [5] 38:9; 43:23; 53:7;  
55:14; 62:14;  
MAJORITY [1] 9:1;  
MAKES [9] 8:12; 11:25; 31:10;  
34:13; 58:7; 70:19; 100:23; 107:17;

116:1;  
MAKING [2] 35:15; 95:22;  
MANAGEMENT [3] 68:23; 82:8;  
82:18;  
MANAGER [1] 5:18;  
MANAGERS' [1] 1:3;  
MANNER [1] 48:20;  
MAP [8] 37:10; 46:2; 50:15; 55:4;  
55:13; 55:14; 118:16; 118:18;  
MAPS [3] 55:17; 76:17; 79:12;  
MARCH [1] 98:13;  
MARK [20] 1:12; 1:18; 12:15;  
17:6; 26:19; 51:21; 51:25; 56:6;  
61:8; 61:15; 61:23; 71:21; 73:14;  
74:11; 75:12; 75:25; 79:23; 92:16;  
108:19; 118:9;  
MARK'S [1] 75:20;  
MASS [1] 33:20;  
MASSIVE [1] 87:22;  
MATERIAL [2] 45:15; 50:11;  
MATERIALS [2] 45:10; 48:20;  
MATH [1] 33:10;  
MATHEMATICALLY [1] 22:20;  
MATRIX [9] 113:2; 113:3;  
113:11; 113:18; 113:19; 114:1;  
114:13; 114:23; 119:10;  
MATTER [6] 21:23; 55:16; 58:19;  
60:3; 63:16; 120:9;  
MAXIMUM [1] 29:10;  
MCL [12] 58:10; 58:10; 78:8;  
78:12; 78:13; 78:16; 79:4; 79:7;  
79:20; 80:12; 80:14; 80:18;  
MCLS [2] 80:15; 92:7;  
MEAN [9] 33:8; 33:25; 36:3; 42:2;  
42:4; 42:19; 57:1; 78:7; 101:4;  
MEANS [6] 3:23; 28:20; 35:5;  
72:23; 95:3; 107:5;  
MEANT [1] 62:5;  
MEASURE [1] 33:23;  
MEASURING [1] 60:10;  
MECHANICS [1] 34:15;  
MECHANISM [5] 34:11; 35:10;  
44:21; 57:8; 67:10;  
MEET [4] 88:19; 89:10; 92:13;  
102:4;  
MEETING [27] 1:3; 5:19; 14:16;  
17:5; 23:3; 44:23; 51:20; 69:23;  
70:6; 70:8; 71:13; 77:8; 82:8;  
86:20; 88:18; 88:22; 90:25; 94:3;  
100:12; 100:14; 109:21; 109:24;  
111:15; 112:1; 112:14; 118:22;  
119:4;  
MEETINGS [7] 48:1; 67:6; 70:3;  
88:18; 88:20; 89:3; 110:20;  
MEETS [3] 62:19; 63:22; 68:7;  
MELL [1] 86:13;  
MEMBERS [2] 68:22; 68:23;  
MEMORY [2] 3:21; 86:14;  
MENTION [3] 3:19; 60:6; 67:20;  
MENTIONED [3] 12:21; 24:19;  
106:5;  
MENTIONING [1] 105:18;  
MERGE [1] 48:6;  
METALS [1] 51:1;  
METHOD [4] 14:15; 99:18;  
101:5; 101:7;  
MG/L [1] 91:17;  
MID [1] 90:1;

July 16, 1998

SKINNYSCRIPT

MIDDLE [2] 28:4; 81:16; MIDST [1] 83:20; MIGHT [18] 11:23; 12:6; 15:14; 20:17; 21:2; 21:9; 36:21; 38:20; 44:21; 52:11; 91:17; 93:12; 93:13; 96:10; 99:24; 102:23; 107:13; 116:9; MIGRATED [1] 42:17; MIGRATING [1] 42:25; MIGRATION [1] 42:6; MILE [1] 56:20; MILESTONE [2] 64:4; 70:17; MIND [3] 28:13; 51:20; 74:9; MINIMAL [1] 36:4; MINIMUM [1] 32:20; MINOR [1] 29:3; MINUS [2] 2:18; 111:18; MINUTE [1] 29:22; MINUTES [1] 105:13; MITIGATED [1] 62:13; MIX [1] 117:6; MOBILE [1] 49:12; MOBILIZATION [1] 3:7; MODERATE [2] 44:9; 44:11; MOMENT [1] 79:24; MONEY [2] 71:4; 71:6; MONITOR [1] 22:25; MONITORED [1] 51:16; MONITORING [10] 12:14; 36:22; 56:3; 60:10; 76:1; 76:4; 83:17; 84:3; 84:13; 90:4; MONTH [6] 20:13; 92:25; 98:15; 110:19; 111:2; 111:2; MONTHLY [1] 89:6; MONTHS [13] 38:3; 39:1; 64:9; 65:15; 69:9; 69:10; 74:6; 83:15; 89:4; 93:13; 98:10; 110:3; 111:12; MORE [41] 6:16; 7:3; 7:11; 7:20; 8:18; 15:21; 16:6; 20:9; 21:10; 32:15; 33:15; 34:5; 35:25; 40:21; 40:24; 41:3; 42:5; 42:23; 43:6; 47:14; 52:21; 54:9; 54:13; 57:4; 57:6; 67:15; 70:14; 71:12; 76:7; 85:16; 85:17; 86:1; 87:9; 87:14; 91:22; 97:23; 106:5; 108:24; 109:13; 114:14; 116:11; MOST [13] 8:13; 33:5; 33:16; 38:10; 41:6; 45:8; 45:13; 47:10; 48:9; 57:23; 58:1; 82:7; 96:21; MOTION [2] 27:17; 104:12; MOVE [3] 3:5; 111:23; 111:24; MOVED [3] 33:21; 78:11; 93:15; MOVING [2] 6:23; 38:7; MUNICIPAL [2] 14:9; 77:5; MUTE [1] 8:22; MW [1] 47:14; MW-10 [2] 50:14; 50:15; MW-16 [7] 6:4; 6:8; 6:25; 44:8; 44:10; 47:15; 47:17; MW-7 [5] 6:4; 6:8; 44:8; 44:8; 47:15; MW-8 [1] 47:18; MYSELF [2] 62:1; 62:4; MYSTERY [2] 34:12; 56:17; =====	NASA [5] 1:19; 26:14; 66:14; 66:18; 105:3; NASA/JET [1] 1:4; NASA/JPL [2] 86:23; 118:23; NATION [1] 14:6; NATURE [3] 13:2; 53:15; 87:20; NEAR [6] 6:25; 50:13; 84:17; 84:18; 84:22; 85:2; NEAREST [1] 84:23; NECESSITY [1] 117:9; NEEDED [1] 70:15; NEEDS [4] 13:9; 54:15; 63:24; 109:16; NEGATIVE [1] 50:24; NEGOTIATIONS [1] 66:24; NEIGHBORHOOD [1] 105:23; NET [2] 102:10; 102:15; NEVADA [1] 15:12; NEVER [9] 34:10; 58:8; 62:20; 63:24; 66:7; 74:9; 79:20; 90:6; 90:8; NEW [8] 19:4; 37:21; 37:23; 38:21; 39:5; 59:23; 66:12; 113:18; NEWS [5] 32:7; 60:1; 65:10; 65:11; 69:10; NEWSPAPER [4] 59:25; 61:2; 65:9; 90:12; NEWSPAPERS [2] 61:25; 62:25; NEWSSTAND [1] 59:13; NEXT [35] 3:4; 6:23; 13:13; 19:18; 20:6; 20:7; 21:11; 22:13; 22:17; 22:22; 27:5; 27:19; 29:23; 51:24; 54:23; 69:13; 75:18; 76:22; 81:6; 83:15; 83:19; 88:18; 89:4; 94:3; 98:13; 98:20; 100:12; 100:14; 108:11; 109:21; 109:23; 111:13; 118:22; 119:4; 119:6; NICE [2] 50:11; 104:19; NICELY [1] 50:10; NICKNAMED [1] 47:16; NIGHTMARE [2] 53:10; 53:25; NIGHTMARES [1] 54:1; NINE [1] 38:21; NIOU [16] 1:15; 6:7; 113:2; 113:7; 113:11; 113:21; 113:23; 114:25; 115:3; 115:6; 115:19; 115:23; 116:11; 116:13; 116:16; 116:21; NITRATE [2] 11:15; 16:19; NITRATES [2] 4:9; 16:7; NITRITE [1] 16:15; NITROGEN [2] 16:7; 39:2; NO-BRAINER [1] 116:5; NOBODY [1] 52:23; NON-EXISTENT [1] 4:10; NON-POINT [1] 57:13; NONDETECTS [3] 11:3; 11:8; 11:14; NONE [1] 30:7; NORMAL [1] 22:17; NORMALIZE [1] 26:18; NORMALIZED [1] 22:19; NORMALLY [2] 9:21; 79:4; NORTH [3] 41:10; 42:12; 58:2; NORTH/SOUTH [1] 41:8; NORTHEASTERN [2] 42:13; 44:17; NORTHERN [1] 44:17; NORTHWEST [1] 40:9; NOTE [1] 38:20;	NOTED [1] 108:15; NOTES [1] 120:12; NOTHING [8] 12:17; 19:4; 61:16; 71:16; 80:11; 83:4; 95:25; 116:22; NOTICE [3] 23:22; 24:12; 25:11; NOVELLY [5] 1:16; 59:22; 118:2; 118:9; 118:16; NOWHERE [1] 104:20; NPDES [5] 12:5; 12:7; 12:15; 12:16; 12:20; NUMBER [15] 14:11; 18:4; 24:15; 26:1; 32:20; 36:12; 49:6; 73:4; 73:16; 74:9; 75:20; 90:19; 91:18; 115:14; 115:15; NUMBERS [9] 17:21; 33:6; 54:22; 55:4; 55:15; 73:12; 78:2; 78:2; 78:3; =====	ONEROUS [1] 12:9; ONES [5] 18:11; 48:24; 50:7; 51:12; 114:5; ONGOING [2] 49:14; 97:11; ONLY [22] 8:1; 10:10; 10:15; 11:15; 13:13; 18:25; 24:1; 29:7; 29:8; 34:12; 38:12; 55:2; 55:3; 73:13; 79:3; 79:8; 82:14; 89:20; 90:18; 90:22; 100:8; 116:4; ONWARDS [1] 24:19; OPEN [1] 70:3; OPERABLE [6] 64:7; 64:8; 86:9; 86:12; 88:11; 98:3; OPERATE [1] 17:24; OPERATING [4] 3:22; 15:22; 15:25; 24:1; OPERATIONS [1] 45:8; OPINION [1] 26:24; OPPORTUNITY [6] 14:5; 14:9; 15:18; 61:12; 64:25; 65:1; OPPOSED [3] 14:8; 16:18; 16:24; OPPOSITE [3] 44:9; 82:17; 82:23; OPTIMIZE [1] 19:1; ORDER [2] 71:20; 102:4; ORGANIZATION [1] 105:20; ORGANIZATIONS [1] 100:20; ORIGINAL [3] 5:12; 45:1; 93:16; ORIGINALLY [1] 23:2; ORIGINALS [1] 5:15; ORIGINATED [1] 43:4; OTHERS [1] 44:3; OTHERWISE [1] 102:23; OU-1 [2] 94:14; 98:11; OURSELVES [3] 31:6; 52:9; 97:25; OUTCOME [2] 58:16; 101:7; OUTRIGHT [1] 75:1; OUTSIDE [4] 50:19; 50:22; 61:2; 106:19; OVERALL [7] 6:2; 39:4; 64:5; 75:14; 93:9; 95:8; 98:2; OVERBOARDED [1] 9:4; OWN [5] 36:5; 71:7; 72:18; 73:17; 73:25; =====
- N - =====		- O - =====	
NAME [4] 61:21; 72:1; 73:3; 104:6; NAMES [1] 73:12; NARROW [2] 35:12; 35:14;		O'CLOCK [2] 119:5; 119:8; OAK [1] 57:18; OATHS [1] 120:6; OBLIGATED [1] 86:20; OBLIGATION [1] 96:4; OBTAIN [2] 108:10; 119:2; OBVIOUS [2] 24:2; 58:12; OBVIOUSLY [4] 23:11; 52:16; 71:21; 72:13; OCTOBER [14] 28:5; 91:2; 110:4; 110:5; 110:6; 110:7; 110:8; 110:9; 110:10; 110:24; 111:3; 111:5; 119:5; 119:15; ODD [1] 2:18; OFF-SITE [1] 81:19; OFFER [1] 4:16; OFFGASSING [2] 42:24; 44:19; OFFICE [6] 5:5; 5:8; 13:13; 50:2; 117:21; 118:12; OFFICIAL [4] 27:19; 63:9; 99:7; 101:4; OFFICIALLY [1] 100:24; OFTENTIMES [1] 69:6; OH [8] 40:5; 51:6; 62:5; 64:17; 65:4; 99:4; 113:10; 115:4; OIL [1] 10:5; OLD [1] 69:10; OLDER [1] 42:13; OLGA [2] 62:4; 62:5; ON-SITE [2] 57:1; 81:21; ONCE [9] 10:19; 10:22; 11:2; 12:25; 28:12; 53:6; 53:9; 103:4; 103:17; ONE [69] 2:8; 6:14; 6:23; 8:13; 11:6; 14:4; 15:3; 15:21; 16:13; 18:7; 18:16; 21:13; 23:9; 32:3; 32:6; 32:15; 32:19; 36:13; 36:14; 38:8; 39:14; 43:14; 43:17; 43:18; 43:18; 43:19; 43:19; 44:4; 49:19; 50:9; 51:24; 54:12; 55:13; 55:13; 55:25; 57:4; 59:4; 59:20; 60:9; 68:2; 69:1; 69:8; 73:3; 74:17; 75:24; 76:25; 80:1; 80:6; 81:13; 81:14; 86:1; 88:19; 96:14; 96:23; 97:16; 98:2; 98:19; 100:15; 101:20; 101:22; 101:24; 106:5; 107:19; 111:14; 111:17; 111:24; 112:19; 113:18; 116:11;	OPERABLE [6] 64:7; 64:8; 86:9; 86:12; 88:11; 98:3; OPERATE [1] 17:24; OPERATING [4] 3:22; 15:22; 15:25; 24:1; OPERATIONS [1] 45:8; OPINION [1] 26:24; OPPORTUNITY [6] 14:5; 14:9; 15:18; 61:12; 64:25; 65:1; OPPOSED [3] 14:8; 16:18; 16:24; OPPOSITE [3] 44:9; 82:17; 82:23; OPTIMIZE [1] 19:1; ORDER [2] 71:20; 102:4; ORGANIZATION [1] 105:20; ORGANIZATIONS [1] 100:20; ORIGINAL [3] 5:12; 45:1; 93:16; ORIGINALLY [1] 23:2; ORIGINALS [1] 5:15; ORIGINATED [1] 43:4; OTHERS [1] 44:3; OTHERWISE [1] 102:23; OU-1 [2] 94:14; 98:11; OURSELVES [3] 31:6; 52:9; 97:25; OUTCOME [2] 58:16; 101:7; OUTRIGHT [1] 75:1; OUTSIDE [4] 50:19; 50:22; 61:2; 106:19; OVERALL [7] 6:2; 39:4; 64:5; 75:14; 93:9; 95:8; 98:2; OVERBOARDED [1] 9:4; OWN [5] 36:5; 71:7; 72:18; 73:17; 73:25; =====
		- P - =====	
		P [2] 79:15; 79:17; PACK [1] 15:3; PACKAGE [2] 97:16; 100:2; PAGE [8] 18:21; 22:17; 22:22; 24:23; 38:6; 52:21; 66:10; 115:17; PAGES [5] 37:16; 37:23; 114:11; 114:16; 120:7; PANGS [1] 96:16; PAPER [4] 65:16; 67:21; 93:19; 105:24; PARALEGALS [1] 105:21; PARDON [2] 43:16; 52:7; PARK [5] 2:14; 4:19; 6:22; 17:17; 57:18; PARKER [1] 31:21; PARKING [1] 40:1; PART [16] 8:10; 15:24; 18:23; 34:3; 34:3; 35:9; 42:9; 49:21; 57:5; 62:23; 82:16; 97:10; 102:3; 104:20; 104:22; 109:6; PARTIALLY [1] 106:20; PARTICIPATION [1] 72:7;	

July 16, 1998

SKINNYSCRIPT

<b>PARTICULAR</b> [14] 3:10; 14:3; 18:17; 18:18; 23:14; 36:24; 40:18; 44:2; 50:15; 61:7; 77:22; 88:9; 96:16; 108:14; <b>PARTICULARLY</b> [5] 44:7; 70:2; 76:14; 100:17; 103:15; 108:17; <b>PARTLY</b> [1] 84:1; <b>PARTS</b> [7] 2:17; 15:10; 16:10; 56:22; 57:25; 79:19; 91:10; <b>PASADENA</b> [14] 2:1; 15:17; 57:20; 57:24; 58:11; 59:5; 60:1; 65:6; 66:14; 66:23; 75:10; 81:10; 82:12; 94:25; <b>PASS</b> [2] 57:21; 58:25; <b>PASSING</b> [1] 106:25; <b>PAST</b> [6] 47:17; 57:18; 72:15; 73:11; 80:4; 87:19; <b>PASTED</b> [2] 10:2; 12:5; <b>PATH</b> [1] 80:7; <b>PAYING</b> [2] 66:15; 68:15; <b>PCE</b> [18] 55:20; 56:11; 56:14; 56:19; 57:12; 57:25; 58:2; 58:9; 58:15; 58:19; 58:20; 79:10; 79:10; 79:16; 80:4; 80:8; 80:10; 80:22; <b>PECKING</b> [1] 71:20; <b>PELL</b> [1] 86:13; <b>PENCILED</b> [1] 93:13; <b>PENDING</b> [3] 62:23; 103:15; 106:4; <b>PEOPLE</b> [14] 30:18; 45:3; 45:9; 69:22; 70:18; 71:12; 72:9; 72:25; 73:12; 73:17; 89:20; 95:24; 100:5; 111:18; <b>PER</b> [20] 2:17; 8:6; 8:7; 10:19; 16:10; 19:23; 19:24; 20:1; 20:2; 20:5; 36:2; 39:6; 54:8; 56:22; 57:25; 79:19; 82:16; 85:11; 91:10; 98:5; <b>PERCENT</b> [8] 8:2; 8:5; 18:19; 19:10; 33:8; 61:22; 78:25; 96:6; <b>PERCENTAGE</b> [1] 9:3; <b>PERCHED</b> [9] 83:23; 84:6; 84:7; 84:8; 84:16; 84:21; 116:17; 117:6; 117:20; <b>PERCHLORATE</b> [43] 2:18; 4:25; 6:5; 6:20; 8:17; 9:1; 10:16; 14:25; 15:7; 15:9; 15:12; 16:18; 16:24; 17:2; 76:15; 80:24; 80:25; 81:3; 81:4; 81:5; 81:6; 81:11; 81:15; 81:19; 81:22; 81:24; 82:13; 82:19; 83:1; 84:17; 84:19; 90:17; 91:1; 91:9; 95:2; 106:21; 106:22; 107:11; 107:13; 107:17; 116:18; 118:3; 118:10; <b>PERCHLORATE'S</b> [2] 4:10; 83:4; <b>PERFECT</b> [1] 64:19; <b>PERIANNE</b> [1] 108:20; <b>PERIOD</b> [5] 20:25; 23:16; 30:13; 62:20; 107:23; <b>PERIODS</b> [1] 20:18; <b>PERMEABILITY</b> [1] 35:6; <b>PERMIT</b> [15] 9:13; 9:17; 9:22; 12:7; 12:20; 29:5; 29:20; 29:21; 30:2; 30:4; 30:10; 30:13; 30:17; 30:23; 31:7; <b>PERMITS</b> [2] 10:2; 12:5; <b>PERSON</b> [1] 73:2; <b>PERSONALLY</b> [2] 26:1; 34:9; <b>PERSPECTIVE</b> [5] 54:17; 70:13;	77:2; 90:7; 109:8; <b>PERSPECTIVES</b> [1] 74:23; <b>PETE</b> [1] 11:18; <b>PETE'S</b> [1] 83:22; <b>PETER</b> [4] 1:19; 36:10; 89:11; 106:4; <b>PETROLEUM</b> [1] 26:2; <b>PH</b> [1] 10:3; <b>PHASE</b> [4] 20:6; 22:13; 27:5; 29:4; <b>PHONE</b> [5] 73:12; 73:16; 74:11; 75:20; 108:16; <b>PHYSICAL</b> [1] 109:5; <b>PHYSICALLY</b> [1] 51:9; <b>PICK</b> [4] 21:4; 25:21; 40:11; 95:25; <b>PICKED</b> [3] 37:21; 40:13; 107:12; <b>PICTURE</b> [3] 60:9; 61:1; 66:12; <b>PICTURES</b> [1] 61:4; <b>PIECE</b> [3] 98:21; 106:12; 106:14; <b>PIECES</b> [2] 97:12; 105:24; <b>PILE</b> [1] 38:7; <b>PILOT</b> [7] 2:9; 8:13; 27:14; 38:19; 38:19; 39:17; 96:22; <b>PIPE</b> [1] 92:11; <b>PIT</b> [2] 46:18; 50:13; <b>PITS</b> [12] 44:25; 45:7; 45:14; 45:18; 47:3; 48:4; 49:8; 50:6; 50:12; 51:4; 51:21; 51:23; <b>PLACE</b> [4] 41:16; 53:15; 89:6; 113:25; <b>PLACED</b> [1] 51:7; <b>PLACES</b> [2] 43:24; 46:1; <b>PLAN</b> [12] 8:14; 8:14; 9:22; 12:1; 37:11; 61:25; 70:6; 74:18; 74:20; 74:20; 92:14; 116:22; <b>PLANNED</b> [2] 23:2; 116:14; <b>PLANNING</b> [7] 3:17; 10:4; 53:23; 68:24; 74:25; 89:5; 95:9; <b>PLANS</b> [4] 99:1; 99:3; 99:4; 99:5; <b>PLANT</b> [4] 15:16; 15:22; 16:2; 16:6; <b>PLAY</b> [1] 28:2; <b>PLAYED</b> [1] 74:11; <b>PLUMBED</b> [2] 45:18; 47:1; <b>PLUMBING</b> [1] 49:17; <b>PLUMBING-ASSOCIATED</b> [1] 47:13; <b>PLUME</b> [10] 39:10; 43:14; 43:17; 43:19; 44:1; 44:2; 54:15; 77:15; 78:10; 80:9; <b>PLUMES</b> [3] 78:4; 78:7; 108:7; <b>PLUS</b> [6] 2:18; 18:1; 20:11; 64:18; 105:2; 111:18; <b>POINT</b> [22] 24:19; 25:10; 52:18; 55:3; 57:21; 61:24; 63:1; 67:14; 70:19; 76:25; 80:1; 80:17; 81:9; 82:6; 88:9; 94:25; 96:7; 101:24; 105:7; 109:15; 109:20; 116:23; <b>POINTED</b> [1] 79:18; <b>POINTS</b> [1] 118:18; <b>POISON</b> [1] 112:8; <b>POLICY</b> [1] 63:7; <b>PONDEROUS</b> [1] 27:17; <b>POO-POOHING</b> [1] 70:11; <b>PORTION</b> [1] 44:18; <b>PORTIONS</b> [2] 42:13; 42:14; <b>PORTRAYED</b> [1] 61:11; <b>POSITIVE</b> [2] 2:21; 4:22; <b>POSSESSION</b> [1] 105:23; <b>POSSIBLE</b> [2] 4:24; 53:4;	<b>POSSIBLY</b> [4] 20:4; 47:5; 48:16; 54:2; <b>POST-RI</b> [3] 76:5; 107:4; 107:5; <b>POSTPONE</b> [1] 97:12; <b>POSTPONED</b> [1] 92:18; <b>POTENTIAL</b> [2] 56:23; 106:3; <b>POTENTIALLY</b> [3] 61:9; 75:4; 102:21; <b>POUNDS</b> [9] 19:23; 19:24; 20:1; 20:2; 20:5; 20:10; 20:11; 20:12; 21:8; <b>POWER</b> [1] 15:23; <b>PPM</b> [1] 6:25; <b>PRE-RI</b> [1] 107:4; <b>PRE-ROD</b> [1] 70:1; <b>PRE-SELECTION</b> [1] 28:7; <b>PREDECESSORS</b> [2] 88:6; 101:23; <b>PREDICTED</b> [1] 21:6; <b>PREFER</b> [1] 5:14; <b>PRELIMINARY</b> [4] 17:16; 97:19; 97:21; 97:22; <b>PREPARATION</b> [1] 74:24; <b>PREPARE</b> [3] 71:1; 82:18; 88:14; <b>PREPARED</b> [1] 89:7; <b>PRESENT</b> [2] 37:13; 92:5; <b>PRESENTING</b> [1] 21:8; <b>PRESS</b> [4] 66:8; 85:21; 85:25; 86:1; <b>PRESSING</b> [1] 96:20; <b>PRESSURE</b> [1] 42:16; <b>PRESUMABLY</b> [1] 28:25; <b>PRETTIER</b> [1] 106:2; <b>PRETTY</b> [23] 7:10; 14:10; 19:13; 19:16; 19:21; 20:22; 21:19; 22:15; 23:5; 23:21; 24:2; 24:5; 28:17; 40:8; 40:16; 41:14; 49:12; 60:14; 84:15; 90:4; 92:3; 93:3; 96:18; <b>PREVIOUS</b> [4] 18:10; 19:20; 31:25; 107:16; <b>PRIMARILY</b> [3] 29:19; 39:16; 42:12; <b>PRIMARY</b> [5] 42:14; 45:2; 45:5; 74:20; 85:2; <b>PRIME</b> [1] 83:21; <b>PRINCIPAL</b> [2] 29:16; 32:1; <b>PROBABLY</b> [28] 7:6; 12:20; 13:18; 27:2; 27:18; 28:4; 31:7; 33:15; 40:5; 40:9; 40:22; 43:4; 48:1; 54:13; 58:3; 58:15; 59:3; 64:10; 64:17; 67:15; 69:13; 73:5; 75:20; 79:5; 83:18; 88:6; 104:13; 105:23; <b>PROBES</b> [1] 40:14; <b>PROBLEM</b> [16] 5:10; 5:24; 9:11; 10:5; 11:12; 11:17; 31:10; 57:9; 63:18; 68:8; 83:11; 83:13; 85:16; 85:17; 93:4; 114:20; <b>PROBLEMS</b> [2] 9:25; 73:6; <b>PROCEEDINGS</b> [1] 120:9; <b>PROCESS</b> [19] 5:3; 6:1; 8:20; 8:24; 28:12; 69:9; 69:15; 71:19; 72:5; 75:19; 95:2; 95:12; 96:4; 96:8; 96:25; 100:19; 100:25; 105:16; 118:4; <b>PROCESSING</b> [1] 3:16; <b>PRODUCE</b> [2] 104:24; 104:25; <b>PRODUCING</b> [1] 6:12; <b>PRODUCTION</b> [6] 78:2; 81:23; 82:11; 83:5; 104:16; 105:19; <b>PROFESSIONALS</b> [1] 90:11;	<b>PROFIED</b> [1] 31:20; <b>PROFIT</b> [1] 15:14; <b>PROGRAM</b> [8] 3:10; 14:3; 62:7; 62:8; 64:5; 64:20; 68:5; 99:11; <b>PROHIBITIVE</b> [1] 54:8; <b>PROJECT</b> [4] 1:3; 5:18; 69:18; 104:8; <b>PROMISING</b> [1] 14:15; <b>PROPER</b> [1] 84:13; <b>PROPERTY</b> [1] 41:9; <b>PROPOSAL</b> [1] 9:8; <b>PROPOSED</b> [3] 70:6; 92:14; 92:15; <b>PROPRIETARY</b> [1] 8:20; <b>PROPULSION</b> [1] 1:4; <b>PROVIDE</b> [6] 5:10; 9:7; 82:22; 86:25; 101:18; 106:18; <b>PROVIDED</b> [1] 61:2; <b>PROVIDING</b> [4] 3:9; 29:7; 97:5; 107:7; <b>PROVINCIAL</b> [2] 91:20; 91:21; <b>PRPS</b> [1] 65:12; <b>PUBLIC</b> [15] 55:12; 64:10; 67:7; 68:3; 70:6; 70:8; 71:11; 71:17; 72:6; 74:10; 74:18; 95:22; 100:16; 100:24; 105:6; <b>PUBLICATION</b> [1] 59:6; <b>PULL</b> [4] 29:9; 29:12; 63:13; 107:19; <b>PULLED</b> [5] 20:8; 20:10; 20:12; 29:8; 57:19; <b>PULLING</b> [3] 27:9; 29:7; 33:19; <b>PUMP</b> [5] 43:10; 43:11; 82:22; 93:6; 102:14; <b>PUMPING</b> [8] 42:15; 42:18; 44:20; 78:18; 78:21; 80:3; 81:2; 82:1; <b>PUMPS</b> [4] 3:11; 57:19; 78:25; 79:1; <b>PURE</b> [1] 63:22; <b>PURPOSE</b> [1] 89:3; <b>PURPOSES</b> [2] 41:2; 41:4; <b>PURSUANT</b> [2] 9:14; 13:23; <b>PURSUE</b> [3] 31:7; 116:23; 117:13; <b>PURSUED</b> [1] 54:8; <b>PURVEYORS</b> [5] 62:18; 64:21; 64:23; 68:6; 106:19; <b>PUSH</b> [2] 67:8; 95:17; <b>PUSHED</b> [1] 83:1; <b>PUTTING</b> [1] 114:13; ===== - Q - ===== <b>QUADRILATERAL</b> [2] 47:22; 47:24; <b>QUALITY</b> [2] 4:13; 18:1; <b>QUARTER</b> [1] 56:20; <b>QUARTERLY</b> [3] 71:15; 76:4; 77:4; <b>QUERY</b> [1] 75:5; <b>QUESTIONABLE</b> [2] 10:8; 25:9; <b>QUESTIONS</b> [24] 6:1; 14:12; 15:20; 32:9; 41:20; 63:4; 73:12; 73:18; 74:3; 75:19; 75:24; 76:18; 83:17; 84:5; 85:20; 92:10; 99:14; 100:3; 100:15; 108:21; 108:24; 109:3; 109:13; 115:6; <b>QUICK</b> [3] 18:11; 33:13; 33:17; <b>QUICKLY</b> [1] 37:14; <b>QUITE</b> [2] 56:22; 82:19; <b>QUOTE</b> [1] 61:22;
--	---	---	---

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SKINNYSCRIPT

QUOTE-UNQUOTE [8] 8:15;  
28:16; 35:22; 47:21; 59:12; 75:2;  
99:7; 109:24;  
QUOTED [3] 51:25; 62:2; 62:3;  
QUOTES [1] 61:7;

=====

- R -

=====

R [3] 1:25; 120:1; 120:3;  
RA [1] 88:10;  
RACE [1] 86:13;  
RADIATION [1] 108:21;  
RADIOLOGY [1] 109:15;  
RADIUS [10] 22:21; 26:3; 26:12;  
32:23; 33:14; 33:18; 33:21; 35:3;  
35:24; 50:10;  
RADIUSES [1] 34:20;  
RAISING [1] 42:19;  
RAN [3] 21:21; 21:25; 84:21;  
RANDOLPH [34] 1:17; 37:8;  
38:9; 39:8; 39:12; 39:16; 39:23;  
40:5; 40:7; 41:14; 42:8; 42:12;  
42:20; 43:2; 43:4; 43:7; 43:16;  
43:21; 45:23; 46:16; 46:22; 47:20;  
51:15; 53:25; 55:18; 55:22; 55:25;  
84:7; 84:10; 85:6; 98:7; 99:1; 99:3;  
117:1;  
RANDOM [2] 54:22; 80:9;  
RANGE [3] 16:10; 90:20; 92:6;  
RANGED [1] 19:23;  
RANK [1] 73:3;  
RATE [14] 7:18; 7:22; 7:22;  
18:18; 19:3; 19:11; 19:12; 19:12;  
19:21; 19:22; 19:22; 21:5; 33:19;  
90:18;  
RATES [11] 7:17; 18:2; 18:13;  
18:14; 18:22; 19:6; 19:6; 19:18;  
19:23; 34:1; 34:16;  
RATHER [4] 18:17; 76:15; 83:10;  
119:10;  
RAYMOND [9] 51:20; 68:23;  
72:18; 82:7; 82:17; 101:25; 102:2;  
102:9; 119:3;  
REACH [1] 35:15;  
REACHED [1] 64:4;  
READ [11] 52:15; 52:16; 55:5;  
61:6; 61:14; 61:15; 66:7; 66:10;  
72:21; 73:18; 113:22;  
READING [2] 22:1; 60:13;  
READY [3] 4:11; 29:21; 70:18;  
REAL [8] 16:13; 18:11; 36:23;  
37:14; 53:10; 53:10; 78:7; 101:14;  
REALLY [29] 7:20; 14:20; 20:16;  
20:19; 20:23; 21:4; 21:22; 23:19;  
25:16; 25:19; 27:3; 27:12; 43:21;  
52:2; 53:21; 54:8; 65:4; 65:5;  
65:24; 69:11; 74:15; 76:12; 80:19;  
90:19; 92:19; 95:4; 104:12; 106:15;  
112:22;  
REASON [9] 6:9; 13:22; 31:2;  
31:3; 73:5; 85:8; 99:21; 117:13;  
117:14;  
REASONABLE [1] 110:13;  
REASONABLY [1] 86:13;  
REASONS [1] 57:4;  
REASSURANCE [1] 71:18;  
REBOUND [4] 22:8; 22:9; 22:12;  
22:16;

REBOUNDS [2] 22:12; 22:15;  
RECALL [7] 32:7; 71:10; 72:11;  
82:14; 93:9; 98:7; 108:22;  
RECEIVED [3] 86:19; 106:19;  
106:22;  
RECEIVING [1] 105:25;  
RECENT [2] 82:7; 96:21;  
RECHARGING [1] 58:5;  
RECOGNIZE [1] 86:4;  
RECOGNIZED [1] 101:5;  
RECOGNIZING [2] 56:24; 69:2;  
RECOMMEND [3] 26:14; 72:17;  
88:13;  
RECONSTRUCT [1] 105:15;  
RECORD [11] 55:11; 103:2;  
103:6; 103:9; 104:21; 104:22;  
105:5; 105:17; 109:7; 109:17;  
118:24;  
RECORDS [1] 105:8;  
RECYCLE [1] 8:17;  
RECYCLING [1] 31:22;  
RED [1] 18:22;  
REDUCE [1] 19:10;  
REDUCED [1] 19:17;  
REFER [1] 40:12;  
REFERENCE [2] 91:1; 91:16;  
REFERRING [1] 66:17;  
REFORMULATED [1] 113:17;  
REFUSE [1] 47:5;  
REFUTE [2] 64:20; 67:24;  
REGARD [2] 3:17; 108:20;  
REGARDING [1] 118:10;  
REGARDLESS [1] 66:19;  
REGENERATE [1] 31:23;  
REGENERATION [6] 7:7; 7:17;  
7:19; 7:22; 16:8; 32:2;  
REGION [1] 105:1;  
REGIONAL [8] 9:18; 12:4; 72:5;  
72:12; 72:15; 100:25; 101:4; 114:3;  
REGULAR [3] 3:2; 71:5; 119:11;  
REGULATIONS [1] 100:8;  
REGULATORS [1] 99:22;  
REGULATORY [2] 29:25; 69:7;  
REINVENT [1] 101:13;  
RELATIONS [9] 31:6; 61:25;  
63:25; 69:4; 69:22; 70:2; 70:8;  
71:11; 72:8;  
RELATIONSHIPS [1] 19:3;  
RELATIVELY [4] 16:23; 16:25;  
37:9; 84:22;  
RELEASEABLE [1] 55:11;  
RELEASED [3] 42:3; 42:4; 74:19;  
RELEVANT [1] 99:12;  
RELIEF [1] 83:8;  
RELUCTANCE [1] 14:20;  
REMEDIAL [8] 1:3; 14:7; 26:13;  
35:22; 41:16; 64:5; 86:10; 102:22;  
REMEDIATED [1] 54:16;  
REMEDIATING [1] 28:20;  
REMEDIATION [10] 4:24; 8:15;  
28:18; 33:4; 41:5; 43:9; 58:16;  
58:18; 69:24; 102:5;  
REMEMBER [16] 25:4; 38:3;  
38:16; 60:4; 60:6; 72:1; 72:4;  
72:10; 86:7; 92:16; 93:5; 98:6;  
98:13; 109:1; 109:4; 116:16;  
REMIND [1] 109:12;  
REMORSE [1] 96:17;

REMOVAL [9] 16:15; 19:1; 19:6;  
19:11; 19:18; 19:21; 19:22; 21:9;  
28:19;  
REMOVE [2] 16:7; 102:8;  
REMOVED [3] 20:7; 35:17; 102:14;  
REPAVING [1] 49:21;  
REPEAT [1] 114:5;  
REPORT [25] 66:18; 66:22;  
75:14; 76:3; 76:5; 76:10; 77:2;  
83:18; 86:11; 86:25; 90:10; 96:22;  
97:3; 97:6; 97:9; 97:19; 97:22;  
98:1; 98:23; 100:13; 109:2; 109:5;  
109:6; 109:16; 118:22;  
REPORTED [3] 1:25; 82:7; 120:8;  
REPORTEDLY [1] 59:18;  
REPORTER [5] 65:22; 73:1;  
73:4; 120:4; 120:19;  
REPORTING [1] 55:10;  
REPORTS [3] 66:21; 90:4; 98:25;  
REPPERDA [1] 61:23;  
REPRESENT [2] 38:5; 41:24;  
REPRESENTS [1] 107:23;  
REQUEST [4] 69:12; 104:4;  
107:1; 111:25;  
REQUESTED [1] 112:23;  
REQUESTS [2] 104:16; 105:25;  
REQUIRE [3] 7:6; 17:24; 41:5;  
REQUIRED [3] 4:2; 13:4; 31:8;  
REQUIREMENT [1] 88:22;  
REQUIREMENTS [6] 9:19;  
12:14; 12:22; 15:23; 99:12; 102:4;  
RESEARCH [1] 99:11;  
RESIN [3] 7:4; 7:18; 16:8;  
RESOLUTION [5] 87:5; 87:18;  
87:24; 88:2; 116:2;  
RESOLVE [1] 88:20;  
RESPOND [1] 95:13;  
RESPONDS [1] 6:20;  
RESPONSE [27] 22:18; 23:4;  
23:12; 23:20; 23:24; 24:11; 25:5;  
26:7; 70:12; 75:5; 86:24; 95:10;  
95:12; 104:10; 112:25; 113:2;  
113:9; 113:16; 114:1; 114:3; 114:6;  
114:7; 114:10; 114:18; 115:15;  
115:16; 119:10;  
RESPONSE-TO-COMMENTS  
[1] 114:10;  
RESPONSES [15] 22:18; 22:20;  
22:24; 23:5; 23:8; 23:20; 24:3;  
24:5; 24:9; 25:11; 25:16; 25:21;  
27:11; 113:20; 119:11;  
REST [1] 23:7;  
RESULT [9] 15:8; 19:11; 53:18;  
56:22; 69:7; 81:11; 107:15; 107:24;  
115:3;  
RESULTS [14] 2:21; 4:22; 13:8;  
17:4; 18:7; 18:9; 18:18; 21:3;  
22:23; 37:6; 39:5; 107:6; 108:4;  
118:17;  
REVEALING [1] 76:15;  
REVERSAL [1] 56:24;  
REVIEW [9] 69:4; 71:19; 72:14;  
86:16; 87:1; 88:14; 90:23; 118:23;  
118:25;  
REVIEWED [1] 101:6;  
REVIEWS [1] 98:18;  
REVISIT [2] 71:20; 91:22;  
REWRITES [1] 87:22;

RI [20] 55:10; 64:8; 74:5; 76:5;  
78:20; 88:10; 90:9; 94:8; 95:13;  
98:5; 98:15; 107:6; 107:9; 107:12;  
107:14; 107:20; 107:21; 108:2;  
117:17; 117:20;  
RI/FS [3] 86:2; 94:14; 96:25;  
RICH [5] 56:7; 106:17; 106:24;  
108:9; 119:1;  
RICHARD [8] 1:13; 32:12; 44:4;  
73:9; 94:20; 98:12; 107:7; 118:4;  
RIDE [1] 67:3;  
RIGHTS [1] 102:8;  
RIPPERDA [171] 1:18; 3:23;  
6:12; 6:16; 7:1; 7:10; 7:12; 7:24;  
9:12; 9:16; 9:21; 9:25; 10:6; 10:13;  
10:22; 10:25; 11:2; 11:6; 11:10;  
11:13; 11:21; 12:3; 12:8; 12:11;  
13:1; 13:5; 13:11; 13:16; 13:21;  
14:14; 14:22; 15:4; 15:21; 16:4;  
16:9; 17:7; 17:16; 30:4; 30:9;  
30:12; 30:17; 30:20; 31:1; 31:9;  
31:14; 31:18; 31:23; 32:22; 33:1;  
33:13; 33:17; 33:23; 34:6; 35:5;  
35:12; 35:18; 41:19; 42:11; 42:21;  
43:3; 43:6; 43:8; 44:22; 45:17;  
45:20; 45:24; 46:4; 46:7; 46:17;  
46:20; 46:25; 47:3; 47:5; 47:9;  
47:13; 47:25; 48:4; 48:7; 48:11;  
48:22; 49:3; 49:11; 49:14; 50:17;  
50:19; 50:22; 51:2; 51:10; 51:19;  
52:2; 52:6; 52:8; 52:14; 54:20;  
54:25; 55:6; 55:9; 61:19; 61:21;  
65:2; 67:11; 67:20; 67:23; 68:1;  
70:5; 71:2; 71:9; 71:11; 71:23;  
72:3; 74:5; 74:8; 81:13; 83:23;  
84:8; 84:11; 84:20; 85:2; 85:7;  
85:14; 87:16; 87:21; 89:19; 89:25;  
90:9; 90:12; 90:18; 91:8; 91:12;  
91:19; 92:1; 92:12; 92:21; 94:6;  
94:12; 95:10; 95:21; 96:5; 97:17;  
98:4; 98:14; 99:19; 100:22; 101:3;  
101:8; 103:19; 103:24; 104:4;  
104:18; 106:11; 106:14; 107:3;  
107:18; 107:21; 108:1; 108:8;  
108:23; 109:11; 110:3; 111:7;  
111:22; 112:22; 114:2; 114:8;  
116:12; 116:24; 117:2; 117:17;  
117:23; 118:7; 118:9;  
RIS [1] 70:16;  
RISE [2] 82:20; 83:10;  
RISING [1] 38:25;  
RISK [9] 86:8; 90:13; 90:14;  
90:20; 90:24; 91:13; 92:1; 92:4; 92:6;  
RIVER [1] 81:1;  
ROAD [6] 17:12; 17:13; 39:24;  
49:21; 85:17; 86:5;  
ROBLES [82] 1:19; 2:15; 11:19;  
17:8; 32:12; 52:3; 52:15; 58:18;  
59:9; 60:7; 61:24; 62:4; 62:6; 63:6;  
63:14; 64:13; 64:19; 65:5; 65:19;  
65:23; 66:1; 66:21; 67:3; 67:12;  
67:17; 67:25; 68:2; 68:18; 69:21;  
72:17; 79:16; 82:10; 85:25; 88:13;  
89:9; 90:6; 91:4; 91:20; 91:25;  
94:3; 94:9; 94:18; 94:22; 99:9;  
99:21; 100:15; 101:2; 101:9;  
101:17; 102:6; 102:24; 103:21;  
104:1; 104:15; 105:1; 110:5; 110:8;

July 16, 1998

SKINNYSRIPT

<p> <b>ROD</b> [4] 94:22; 95:14; 96:2; 103:5;  <b>ROGERS</b> [1] 17:9;  <b>ROOM</b> [2] 30:7; 83:22;  <b>ROUGHLY</b> [2] 22:25; 32:19;  <b>ROUND</b> [2] 33:6; 38:12;  <b>ROUNDS</b> [8] 22:12; 37:5; 37:10;  37:16; 37:17; 38:1; 38:11; 43:22;  <b>RPM</b> [11] 23:3; 63:7; 73:20;  88:18; 94:3; 100:12; 100:14;  109:23; 112:18; 118:22; 119:4;  <b>RPMS</b> [5] 13:24; 65:12; 101:1;  118:20; 118:24;  <b>RPMS'</b> [1] 73:11;  <b>RUBBER</b> [1] 101:11;  <b>RUBIO</b> [2] 57:22; 58:11;  <b>RUN</b> [4] 18:11; 28:23; 31:2; 117:25;  <b>RUNNING</b> [7] 2:22; 4:4; 28:4;  89:13; 93:4; 93:7; 96:11;  <b>RUNS</b> [1] 2:24;  <b>RWQCB-LA</b> [1] 1:11;  =====   <b>- S -</b>   =====   <b>S</b> [1] 1:14;  <b>SACRAMENTO</b> [2] 72:25; 73:2;  <b>SAFE</b> [2] 68:7; 68:9;  <b>SAKE</b> [1] 73:10;  <b>SAME</b> [35] 4:21; 6:13; 16:1;  16:17; 19:9; 19:12; 19:13; 19:16;  19:22; 21:20; 22:15; 23:17; 24:2;  24:6; 24:23; 25:1; 25:3; 25:16;  26:23; 28:23; 28:24; 29:25; 37:10;  40:6; 44:1; 50:6; 63:17; 73:19;  78:14; 85:12; 89:17; 105:25; 112:6;  117:2; 117:3;  <b>SAMPLE</b> [9] 10:13; 11:10; 11:13;  11:15; 20:19; 21:3; 21:15; 21:16;  77:23;  <b>SAMPLED</b> [3] 50:11; 50:12; 51:4;  <b>SAMPLES</b> [3] 20:21; 20:24; 48:8;  <b>SAMPLING</b> [13] 3:20; 4:3; 6:3;  10:17; 21:12; 38:3; 38:14; 38:17;  38:22; 53:8; 58:22; 107:9; 118:17;  <b>SAN</b> [6] 2:12; 4:5; 16:24; 93:2;  93:3; 111:15;  <b>SAND</b> [1] 35:3;  <b>SANITARY</b> [1] 45:16;  <b>SAT</b> [1] 103:7;  <b>SAW</b> [9] 15:17; 19:13; 21:25;  22:5; 35:3; 44:6; 44:8; 44:10; 60:13;  <b>SAYING</b> [10] 13:25; 14:17; 62:18;  68:7; 70:20; 70:22; 87:23; 100:24;  113:14; 117:5;  <b>SCAN</b> [1] 12:13;  <b>SCANNING</b> [1] 61:21;  <b>SCARED</b> [1] 67:23;  <b>SCARY</b> [1] 76:14;  <b>SCATTERED</b> [1] 42:22;  <b>SCENARIO</b> [3] 56:6; 82:17;  102:22;  <b>SCHEDULE</b> [15] 3:20; 29:17;  74:14; 88:17; 89:13; 92:13; 93:9;  93:16; 93:24; 95:9; 97:4; 97:5;  98:4; 98:17; 111:12;  <b>SCHEDULED</b> [4] 90:1; 109:23;  109:24; 111:14;  <b>SCHEDULES</b> [2] 86:14; 110:14;  <b>SCIENCE</b> [1] 14:23; </p>	<p> <b>SCIENTIFIC</b> [1] 32:14;  <b>SCOPING</b> [1] 43:8;  <b>SCREEN</b> [8] 18:15; 21:17; 21:18;  21:19; 21:21; 21:22; 21:24; 21:25;  <b>SCREENS</b> [4] 18:17; 18:24;  18:25; 81:18;  <b>SCREWED</b> [1] 93:7;  <b>SE</b> [3] 39:6; 54:9; 85:11;  <b>SECO</b> [1] 57:18;  <b>SECOND</b> [11] 18:21; 18:22; 19:2;  29:6; 37:22; 78:10; 80:10; 97:10;  102:24; 110:19; 112:13;  <b>SECTION</b> [1] 120:5;  <b>SEEING</b> [12] 5:1; 12:18; 12:19;  17:20; 17:23; 23:20; 27:1; 27:12;  28:19; 56:9; 64:12; 85:1;  <b>SEEM</b> [3] 30:21; 40:11; 56:11;  <b>SEEMED</b> [1] 80:7;  <b>SEEMS</b> [10] 40:15; 40:18; 43:23;  44:15; 61:13; 82:1; 82:25; 90:4;  92:7; 108:18;  <b>SEEN</b> [8] 4:18; 26:19; 34:10;  34:23; 36:8; 45:8; 58:8; 90:8;  <b>SEEPAGE</b> [7] 44:25; 45:7; 45:14;  45:18; 50:5; 50:13; 51:4;  <b>SEGUE</b> [2] 37:2; 68:25;  <b>SELF-EXPLANATORY</b> [1] 37:9;  <b>SEMI-VOLATILES</b> [2] 11:4; 11:22;  <b>SEND</b> [2] 66:2; 118:24;  <b>SENSE</b> [9] 11:25; 27:4; 34:13;  36:6; 54:12; 58:7; 70:19; 78:6;  107:17;  <b>SENSITIVE</b> [1] 33:24;  <b>SENT</b> [6] 5:12; 5:15; 31:21; 59:6;  59:7; 68:22;  <b>SEPARATIONS</b> [1] 78:7;  <b>SEPTEMBER</b> [12] 86:5; 86:7;  90:1; 97:7; 98:1; 109:22; 110:1;  110:3; 111:13; 112:5; 112:18; 119:7;  <b>SEPTIC</b> [1] 50:4;  <b>SERIAL</b> [1] 73:3;  <b>SERIES</b> [1] 50:3;  <b>SERIOUS</b> [1] 26:16;  <b>SERIOUSLY</b> [1] 15:1;  <b>SERVES</b> [2] 3:21; 86:15;  <b>SERVICE</b> [1] 56:19;  <b>SET</b> [8] 3:7; 13:19; 18:18; 20:21;  27:16; 38:22; 54:7; 111:4;  <b>SETTING</b> [1] 109:21;  <b>SEVEN</b> [1] 33:16;  <b>SEVERAL</b> [3] 38:23; 56:21; 98:25;  <b>SEWER</b> [1] 3:18;  <b>SHALLOW</b> [1] 116:16;  <b>SHALLOWER</b> [1] 80:20;  <b>SHALT</b> [1] 49:4;  <b>SHIARE</b> [4] 9:9; 60:25; 77:3; 92:25;  <b>SHARES</b> [1] 66:15;  <b>SHARING</b> [1] 8:22;  <b>SHEET</b> [28] 18:12; 19:2; 19:5;  19:18; 19:20; 20:7; 21:11; 24:2;  25:14; 64:1; 64:13; 64:16; 64:25;  65:6; 65:18; 66:2; 66:4; 67:9;  67:17; 67:18; 67:20; 67:24; 68:21;  69:5; 71:1; 71:14; 73:18; 103:3;  <b>SHEETS</b> [7] 65:20; 69:6; 70:10;  71:5; 71:7; 71:15; 73:10;  <b>SHIT</b> [1] 90:13;  <b>SHOOT</b> [1] 112:16; </p>	<p> <b>SHORTHAND</b> [2] 120:4; 120:19;  <b>SHOW</b> [15] 21:23; 22:18; 22:23;  23:7; 23:24; 30:24; 37:4; 37:7;  39:5; 55:15; 64:20; 76:12; 108:7;  117:19; 119:10;  <b>SHOW-STOPPING</b> [1] 66:11;  <b>SHOWED</b> [1] 25:5;  <b>SHOWING</b> [4] 23:5; 23:19; 26:7;  118:17;  <b>SHOWN</b> [3] 24:12; 50:14; 82:13;  <b>SHOWS</b> [7] 18:12; 18:21; 19:2;  19:5; 19:18; 20:7; 21:11;  <b>SHUT</b> [11] 23:15; 23:25; 24:7;  24:8; 25:1; 25:9; 25:22; 27:7; 32:4;  57:24; 80:7;  <b>SIDE</b> [2] 49:22; 83:12;  <b>SIDELIGHT</b> [1] 60:25;  <b>SIDEWALK</b> [2] 59:9; 59:10;  <b>SIGH</b> [1] 83:8;  <b>SIGNIFICANT</b> [1] 24:13;  <b>SIGNIFICANTLY</b> [2] 21:9; 21:18;  <b>SILTED</b> [1] 49:15;  <b>SILVER</b> [1] 4:25;  <b>SIMILAR</b> [6] 8:24; 10:2; 55:19;  81:4; 84:4; 85:6;  <b>SINCE</b> [8] 11:15; 76:12; 83:10;  97:17; 101:14; 104:2; 108:1; 108:5;  <b>SINGLE</b> [2] 49:10; 105:22;  <b>SITE</b> [37] 2:16; 2:16; 2:20; 3:6;  4:6; 6:6; 10:16; 14:8; 17:22; 27:2;  27:3; 27:24; 36:7; 36:8; 39:10;  45:2; 46:6; 53:11; 53:20; 56:13;  58:17; 70:7; 71:1; 76:20; 77:10;  77:13; 77:19; 78:8; 78:9; 79:3;  79:20; 81:4; 81:8; 93:3; 97:24;  99:15; 101:16;  <b>SITTING</b> [3] 49:24; 50:8; 86:6;  <b>SITUATION</b> [4] 69:5; 73:13;  75:9; 87:14;  <b>SIX</b> [6] 33:16; 65:15; 69:9; 69:10;  93:13; 98:10;  <b>SIX-MONTH</b> [4] 93:10; 93:23;  94:6; 94:7;  <b>SIZE</b> [1] 36:9;  <b>SKETCH</b> [1] 37:10;  <b>SKEW</b> [2] 63:14; 66:5;  <b>SKEWED</b> [1] 65:13;  <b>SKIP</b> [1] 14:11;  <b>SLICES</b> [1] 53:20;  <b>SLIDE</b> [1] 115:22;  <b>SLIGHT</b> [1] 21:23;  <b>SMALL</b> [8] 9:3; 26:24; 42:21;  83:1; 112:22; 114:17; 115:21; 116:5;  <b>SMALLER</b> [1] 68:21;  <b>SMILING</b> [1] 32:12;  <b>SNAG</b> [1] 31:3;  <b>SOFTWARE</b> [3] 99:12; 100:2;  118:22;  <b>SOIL</b> [23] 18:4; 28:21; 36:22;  37:4; 37:6; 38:18; 39:7; 39:17;  40:14; 42:6; 43:11; 44:6; 48:8;  51:7; 51:14; 51:17; 53:3; 54:10;  56:10; 58:22; 59:2; 84:6; 118:17;  <b>SOILS</b> [3] 50:12; 98:5; 98:15;  <b>SOLD</b> [1] 4:11;  <b>SOLIDS</b> [1] 10:4;  <b>SOLVENT</b> [1] 79:5;  <b>SOMETIME</b> [2] 3:14; 94:1; </p>	<p> <b>SOMETIMES</b> [1] 30:14;  <b>SOMEWHAT</b> [8] 8:11; 8:22;  35:12; 41:25; 54:22; 83:7; 96:11;  101:22;  <b>SOON</b> [1] 4:24;  <b>SOONER</b> [3] 31:11; 96:1; 96:2;  <b>SORRY</b> [4] 63:2; 71:10; 79:17;  116:15;  <b>SORT</b> [1] 95:8;  <b>SOUND</b> [1] 110:13;  <b>SOUNDS</b> [10] 12:1; 13:6; 31:17;  41:13; 67:1; 84:5; 93:22; 98:12;  106:6; 109:9;  <b>SOURCE</b> [23] 42:5; 42:14; 42:23;  43:25; 47:9; 49:15; 56:12; 56:14;  56:24; 57:11; 57:13; 57:13; 58:13;  80:19; 81:2; 81:19; 81:21; 85:11;  85:13; 85:14; 85:14; 117:10; 117:15;  <b>SOURCES</b> [6] 42:22; 43:5; 43:11;  44:22; 45:2; 64:7;  <b>SOUTH</b> [2] 41:11; 57:23;  <b>SOUTHEAST</b> [1] 40:22;  <b>SOUTHERLY</b> [1] 57:23;  <b>SOUTHERN</b> [3] 15:11; 15:11; 57:5;  <b>SPEAK</b> [1] 17:21;  <b>SPECIAL</b> [1] 68:21;  <b>SPECIFIC</b> [1] 39:14;  <b>SPECIFICALLY</b> [2] 46:12; 51:8;  <b>SPECIFICATIONS</b> [3] 48:19;  48:25; 50:7;  <b>SPECIFIED</b> [1] 120:10;  <b>SPECTRUM</b> [1] 17:1;  <b>SPEED</b> [2] 28:11; 88:15;  <b>SPENDING</b> [1] 71:4;  <b>SPIKE</b> [1] 21:2;  <b>SPIN</b> [1] 102:19;  <b>SPORADICALLY</b> [1] 42:3;  <b>SPOT</b> [1] 15:13;  <b>SPREAD</b> [1] 44:19;  <b>SPREADING</b> [1] 58:6;  <b>SPRING</b> [2] 37:18; 38:13;  <b>SQUARE</b> [6] 39:20; 39:21; 39:22;  39:23; 47:14; 47:17;  <b>SQUEEZING</b> [1] 40:20;  <b>STABLE</b> [1] 108:4;  <b>STAFF</b> [4] 72:8; 103:18; 105:3;  110:20;  <b>STAGE</b> [2] 16:5; 87:9;  <b>STAKEHOLDERS</b> [1] 17:5;  <b>STAMP</b> [1] 101:11;  <b>STANDARD</b> [4] 12:13; 12:14;  63:22; 92:3;  <b>STANDARDS</b> [2] 62:20; 68:8;  <b>STANDPOINT</b> [2] 41:15; 68:6;  <b>STANDS</b> [1] 46:17;  <b>STAR</b> [3] 60:1; 65:10; 65:11;  <b>START</b> [7] 6:16; 6:19; 13:22;  14:7; 40:20; 68:2; 104:2;  <b>START-UP</b> [3] 10:23; 11:14; 12:25;  <b>STARTED</b> [7] 17:13; 21:13;  21:14; 22:3; 22:24; 23:23; 24:4;  <b>STATE</b> [3] 72:5; 99:17; 103:9;  <b>STATE'S</b> [1] 91:18;  <b>STATED</b> [2] 90:25; 95:1;  <b>STATEMENTS</b> [2] 65:8; 66:15;  <b>STATUS</b> [1] 2:9;  <b>STENOGRAPHIC</b> [1] 120:12;  <b>STEP</b> [2] 23:6; 75:18; </p>
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July 16, 1998

SKINNYSCRIPT

STEPHEN [2] 1:15; 112:23; STEPHEN'S [1] 104:5; STEVE [3] 23:4; 114:20; 114:22; STICKS [1] 51:19; STILL [26] 4:15; 9:16; 11:7; 28:18; 34:11; 34:20; 38:25; 40:7; 44:16; 49:16; 52:23; 58:14; 66:5; 66:25; 70:21; 71:17; 72:13; 72:16; 73:22; 81:10; 83:8; 92:6; 97:8; 101:25; 108:10; 117:18; STONES [1] 68:2; STOP [1] 63:15; STORAGE [1] 3:11; STORE [1] 4:12; STORM [2] 3:18; 118:11; STORY [1] 61:6; STRAIGHTFORWARD [2] 90:5; 92:8; STREAM [1] 9:2; STREET [1] 75:2; STRIKES [1] 34:13; STRIP [2] 35:12; 35:14; STRONG [1] 15:10; STRONGLY [2] 26:8; 26:9; STRUCK [1] 44:5; STUDY [14] 69:25; 92:19; 92:24; 93:15; 93:17; 93:19; 95:4; 95:5; 95:7; 95:15; 97:5; 98:3; 98:15; 102:13; STUFF [12] 4:7; 4:11; 5:12; 35:14; 45:21; 47:13; 59:2; 76:1; 76:15; 83:21; 84:14; 105:14; STUFF'S [1] 30:21; SUBJECT [2] 24:20; 107:3; SUBJECTS [1] 89:10; SUBLAYER [1] 104:25; SUBMISSION [2] 88:23; 112:12; SUBMIT [1] 97:13; SUBMITTAL [2] 96:21; 97:12; SUBMITTED [3] 98:23; 104:7; 109:2; SUBMITTING [1] 110:2; SUBSEQUENT [2] 86:23; 88:23; SUBSURFACE [1] 42:7; SUCH [5] 14:15; 19:8; 102:9; 115:16; 115:16; SUCK [2] 35:20; 58:19; SUCKED [1] 81:23; SUFFICIENT [1] 33:25; SUGGESTED [1] 109:5; SUGGESTION [1] 111:5; SUGGESTIONS [1] 77:1; SUITE [2] 10:14; 10:18; SUMMARY [2] 38:6; 116:8; SUPERFUND [3] 65:15; 96:3; 99:15; SUPPLY [2] 57:24; 61:1; SUPPLYING [1] 3:10; SUPPORT [3] 3:9; 31:4; 99:11; SUSPOSED [1] 3:3; SURE [30] 3:19; 5:24; 9:20; 11:24; 12:1; 12:8; 12:10; 12:16; 13:7; 13:8; 16:3; 16:20; 25:20; 27:12; 40:10; 48:3; 55:16; 67:5; 72:12; 73:22; 75:1; 75:7; 79:25; 86:3; 89:22; 103:16; 106:8; 107:1; 113:25; 114:19; SURFACE [1] 53:17;	SURPRISE [1] 75:17; SURPRISED [1] 80:4; SURPRISES [2] 38:21; 39:6; SUSPENDE [1] 10:4; SVE [5] 36:23; 96:21; 97:5; 98:23; 113:8; SVW-36 [2] 116:14; 116:17; SWITCH [1] 11:11; SYMPATHIZE [1] 105:19; SYNC [1] 87:11; SYNOPSIS [1] 115:13; SYNTHESIZED [1] 114:16; SYSTEM [20] 2:22; 2:25; 3:17; 3:21; 3:22; 4:17; 4:19; 6:20; 8:3; 16:14; 16:15; 17:24; 25:22; 29:6; 29:9; 35:23; 36:4; 36:17; 54:5; 102:15; SYSTEMS [1] 29:5; =====	- T - =====	TELEPHONE [1] 18:10; TELL [3] 63:1; 71:16; 102:2; TELLS [2] 33:7; 95:5; TEMPLATE [1] 103:12; TEMPORARILY [1] 92:18; TEN [2] 36:10; 36:12; TEND [1] 97:20; TENDS [1] 53:15; TENOR [1] 52:25; TENS [1] 2:17; TENTATIVE [1] 74:18; TENTATIVELY [1] 60:19; TERM [5] 26:18; 36:17; 50:25; 75:17; 92:12; TERMED [2] 47:21; 57:16; TERMS [18] 8:13; 8:22; 9:12; 10:18; 12:15; 16:2; 29:3; 29:16; 39:6; 39:7; 39:10; 48:19; 51:17; 56:12; 69:17; 69:18; 75:18; 77:1; TEST [43] 3:3; 5:23; 6:3; 7:21; 11:16; 18:5; 18:13; 18:13; 18:22; 18:23; 19:19; 19:19; 19:24; 19:25; 20:6; 20:10; 20:10; 20:14; 22:3; 22:3; 22:4; 22:11; 22:13; 22:18; 22:24; 23:16; 24:7; 24:8; 25:5; 26:9; 26:11; 27:6; 28:25; 32:10; 34:5; 38:19; 38:19; 39:17; 54:11; 58:23; 60:18; 96:22; 97:18; TESTED [1] 19:14; TESTING [1] 31:25; TESTS [7] 10:10; 20:8; 20:15; 21:14; 21:14; 28:23; 37:5; TET [13] 20:11; 21:6; 40:13; 41:25; 42:2; 42:10; 44:9; 44:11; 55:13; 77:9; 77:11; 77:14; 77:17; TETRACHLORIDE [1] 20:3; TEXT [1] 115:17; THAN [35] 4:8; 12:22; 16:6; 20:9; 20:13; 21:6; 23:1; 32:15; 32:15; 33:15; 33:19; 35:25; 39:13; 39:14; 44:3; 46:11; 52:21; 54:14; 57:23; 58:10; 71:13; 73:3; 73:17; 76:7; 85:4; 85:5; 85:15; 87:9; 89:6; 102:22; 106:5; 107:16; 115:10; 116:24; 119:10; THANK [5] 14:3; 79:17; 110:9; 112:4; 119:13; THEMSELVES [2] 49:8; 50:13; THEORETICALLY [2] 27:1; 88:11; THEORY [1] 35:16; THERE'S [31] 9:25; 10:6; 12:16; 14:23; 61:8; 61:16; 68:3; 68:8; 71:16; 73:5; 76:13; 77:13; 77:24; 78:4; 78:7; 80:8; 80:21; 81:15; 84:5; 89:14; 89:15; 90:9; 97:17; 103:22; 104:13; 104:21; 114:23; 115:6; 116:16; 117:12; 117:14; THEREBY [1] 8:18; THEREIN [1] 120:10; THING [43] 2:23; 2:24; 4:12; 4:23; 7:5; 15:14; 16:11; 17:5; 23:23; 27:7; 28:13; 28:24; 34:4; 34:12; 36:20; 52:17; 53:22; 55:2; 58:24; 59:11; 60:9; 61:15; 63:6; 67:17; 69:17; 72:22; 76:25; 78:15; 80:1; 88:17; 90:22; 97:13; 97:15; 98:19; 102:7; 102:24; 108:11; 108:19; 111:19; 116:6; 116:11; 117:2; 117:3; THINGS [33] 3:7; 3:12; 3:13; 7:15; 10:6; 10:19; 15:9; 16:13; 18:2; 29:19; 44:5; 48:10; 48:13; 48:14; 48:18; 49:2; 49:6; 50:1; 52:18; 53:12; 59:13; 69:1; 76:11; 82:6; 83:21; 85:23; 98:22; 99:5; 100:7; 104:1; 105:10; 107:4; 111:11; THINKING [5] 10:20; 10:22; 41:12; 87:12; 115:10; THIRD [7] 33:9; 36:16; 38:6; 77:17; 110:21; 110:22; 111:1; THOU [1] 49:4; THOUGH [14] 5:20; 8:10; 9:17; 13:13; 16:9; 21:8; 30:5; 31:8; 33:3; 40:11; 88:10; 91:5; 106:11; 117:18; THOUGHT [8] 39:24; 54:4; 60:14; 62:5; 62:7; 76:11; 76:16; 92:23; THOUGHTS [2] 75:6; 77:1; THREE [18] 8:5; 13:24; 18:16; 18:24; 27:2; 27:9; 32:13; 34:21; 37:16; 38:14; 46:2; 57:6; 69:14; 76:20; 83:19; 98:24; 99:17; 110:3; THREE-DIMENSIONAL [1] 53:15; THREE-MONTH [1] 109:25; THREW [1] 77:7; THRILLED [1] 26:3; THROUGH [31] 3:16; 8:2; 12:8; 18:11; 21:3; 24:11; 28:7; 34:5; 37:23; 38:17; 41:11; 42:3; 42:25; 51:12; 57:15; 58:4; 62:16; 62:20; 69:9; 73:25; 76:17; 81:20; 83:2; 83:2; 87:18; 88:24; 89:16; 100:20; 104:11; 105:1; 105:21; THROUGHOUT [5] 16:16; 40:16; 42:6; 42:22; 53:18; THROW [2] 67:15; 101:21; THROWING [2] 45:3; 68:2; THURSDAY [9] 110:17; 110:18; 110:21; 110:24; 111:1; 111:5; 111:14; 112:13; 119:4; THURSDAYS [2] 110:19; 111:2; THUS [5] 2:19; 4:15; 17:20; 96:17; 108:17; TICKED [1] 65:4; TIED [1] 73:1; TIME [55] 3:22; 6:13; 11:7; 13:19; 17:3; 19:7; 20:18; 20:20; 22:10; 22:25; 23:3; 24:1; 26:5; 27:18; 27:22; 27:22; 28:5; 29:17; 30:3; 38:1; 40:25; 41:1; 42:10; 44:19; 45:12; 48:24; 49:19; 54:6; 64:15; 64:17; 64:19; 65:15; 66:3; 67:14; 70:4; 70:24; 78:25; 85:21; 87:3; 88:12; 88:15; 92:21; 93:16; 106:8; 107:8; 107:14; 107:23; 107:25; 109:19; 109:21; 109:25; 110:11; 112:6; 112:12; 114:9; TIMES [4] 11:1; 34:21; 59:21; 60:2; TIMING [4] 36:21; 69:17; 69:18; 77:6; TINKERING [1] 17:25; TIP [1] 38:22; TITLE [1] 62:17; TODAY [3] 5:18; 60:3; 106:25;
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July 16, 1998

SKINNYSCRIPT

<b>TODAY'S</b> [1] 118:2;	<b>TYPE</b> [4] 11:23; 12:5; 43:18; 114:3;	<b>USED</b> [7] 42:3; 71:15; 71:24;	<b>WATER</b> [56] 3:16; 4:8; 4:13;
<b>TOGETHER</b> [9] 3:14; 19:15;	<b>TYPED-OUT</b> [1] 119:11;	78:3; 79:4; 100:24; 101:5;	7:15; 16:7; 26:17; 26:20; 29:1;
48:6; 74:22; 87:7; 88:16; 88:19;	<b>TYPES</b> [1] 54:10;	<b>USES</b> [2] 16:6; 44:16;	30:6; 33:19; 33:24; 34:14; 35:10;
93:17; 113:24;	<b>TYPICALLY</b> [4] 27:25; 32:17;	<b>USING</b> [4] 8:24; 108:5; 108:6;	36:18; 38:23; 39:3; 42:19; 52:22;
<b>TOILETS</b> [1] 45:21;	73:11; 114:4;	119:9;	52:24; 56:19; 57:24; 58:4; 62:14;
<b>TOLD</b> [1] 62:10;	=====	<b>USUALLY</b> [1] 114:15;	62:18; 62:18; 62:19; 62:20; 63:20;
<b>TOMORROW</b> [1] 5:19;	<b>- U -</b>	=====	63:22; 64:12; 64:22; 64:24; 68:6;
<b>TOOK</b> [5] 10:1; 36:15; 53:19;	=====	<b>- V -</b>	68:7; 68:8; 68:9; 77:24; 81:1;
66:18; 69:8;	<b>U.S</b> [1] 31:21;	=====	82:22; 82:25; 83:9; 84:1; 84:7;
<b>TOP</b> [2] 48:15; 92:16;	<b>UGLIER</b> [1] 106:1;	<b>VACILLATING</b> [1] 98:8;	84:8; 84:12; 84:16; 84:21; 99:17;
<b>TOPOGRAPHY</b> [2] 53:11; 53:19;	<b>ULTIMATE</b> [2] 2:25; 96:25;	<b>VACUUM</b> [17] 18:16; 18:19;	100:6; 102:7; 102:8; 102:14;
<b>TOTAL</b> [6] 8:2; 8:18; 10:3; 19:11;	<b>ULTIMATELY</b> [3] 9:2; 103:4;	18:24; 18:25; 19:3; 19:10; 21:17;	106:19; 117:19; 117:20; 118:11;
21:8; 90:13;	103:14;	22:17; 22:23; 24:3; 24:9; 24:20;	<b>WAVED</b> [1] 58:24;
<b>TOTALLY</b> [1] 77:10;	<b>UNBELIEVABLE</b> [2] 26:6; 61:19;	25:19; 25:25; 29:10; 32:17; 34:9;	<b>WAY</b> [24] 5:14; 12:2; 23:18;
<b>TOUCHED</b> [1] 64:2;	<b>UNDER</b> [1] 120:5;	<b>VACUUMS</b> [3] 19:17; 29:10; 77:24;	24:21; 25:16; 25:21; 35:15; 48:17;
<b>TOWARD</b> [4] 17:3; 22:4; 46:8;	<b>UNDERGOING</b> [1] 105:20;	<b>VADOSE</b> [2] 43:1; 98:5;	55:8; 61:10; 61:13; 61:14; 65:18;
81:23;	<b>UNDERLYING</b> [2] 83:25; 84:1;	<b>VALLEY</b> [3] 2:13; 16:25; 56:19;	77:23; 87:13; 102:6; 105:15;
<b>TOWARDS</b> [1] 41:24;	<b>UNDERNEATH</b> [1] 48:8;	<b>VALUABLE</b> [1] 4:18;	109:15; 112:11; 113:19; 113:22;
<b>TOWN</b> [2] 69:23; 70:7;	<b>UNDERSTAND</b> [20] 11:25;	<b>VAPOR</b> [29] 18:5; 21:12; 22:5;	114:4; 116:8; 117:20;
<b>TOXIC</b> [1] 66:13;	14:19; 15:25; 16:12; 34:4; 34:15;	26:12; 28:18; 28:21; 32:10; 36:22;	<b>WAYS</b> [3] 30:2; 75:3; 95:4;
<b>TOXICOLOGIST</b> [1] 89:21;	35:21; 44:14; 52:13; 53:22; 57:7;	37:4; 37:6; 37:17; 38:18; 39:7;	<b>WEBER</b> [1] 74:11;
<b>TOXICOLOGY</b> [1] 92:3;	57:9; 66:6; 85:8; 95:1; 101:2;	39:9; 39:17; 40:14; 44:6; 51:14;	<b>WEDNESDAY</b> [7] 82:9; 82:10;
<b>TRACK</b> [1] 97:8;	113:6; 115:25; 116:7; 116:9;	51:18; 56:10; 57:2; 58:21; 58:22;	82:11; 111:20; 111:23; 111:25;
<b>TRADITIONAL</b> [1] 85:13;	<b>UNDERSTANDING</b> [2] 59:19;	59:2; 83:24; 84:2; 84:6; 84:8; 118:17;	119:6;
<b>TRAIN</b> [1] 89:17;	106:2;	<b>VARIOUS</b> [6] 3:12; 16:16; 37:20;	<b>WEEK</b> [27] 3:4; 3:6; 3:15; 11:2;
<b>TRANSCRIPT</b> [2] 120:8; 120:10;	<b>UNDERSTOOD</b> [2] 48:17; 93:20;	51:7; 75:3; 106:19;	11:7; 11:14; 12:25; 13:12; 13:13;
<b>TRANSCRIPTION</b> [1] 120:11;	<b>UNFEASIBLE</b> [1] 17:18;	<b>VARYING</b> [2] 16:21; 53:18;	18:17; 21:16; 22:2; 22:6; 27:10;
<b>TRANSDUCER</b> [1] 83:24;	<b>UNFOLDS</b> [1] 17:2;	<b>VE-1</b> [1] 23:11;	27:19; 28:10; 60:2; 74:19; 74:20;
<b>TRANSLATES</b> [1] 20:1;	<b>UNFORTUNATE</b> [1] 69:5;	<b>VEHICLE</b> [1] 28:12;	76:7; 76:7; 82:8; 110:11; 110:13;
<b>TREAT</b> [2] 45:15; 102:15;	<b>UNFORTUNATELY</b> [2] 65:24;	<b>VEHICLES</b> [1] 27:16;	112:7; 112:7; 118:12;
<b>TREATABILITY</b> [4] 92:19;	106:24;	<b>VENDOR</b> [2] 28:7; 28:8;	<b>WEEKLY</b> [6] 59:6; 65:7; 75:10;
92:24; 93:15; 93:17;	<b>UNINTELLIGIBLE</b> [8] 17:18;	<b>VERBAL</b> [1] 4:6;	89:8; 89:9; 94:25;
<b>TREATMENT</b> [4] 14:8; 16:9;	49:12; 54:20; 55:14; 72:24; 73:8;	<b>VERIFY</b> [2] 4:14; 111:10;	<b>WEEKS</b> [9] 27:10; 28:1; 30:14;
118:3; 118:11;	80:6; 99:20;	<b>VERSION</b> [3] 76:6; 97:2; 97:11;	30:20; 31:1; 69:14; 76:8; 83:19;
<b>TREMENDOUS</b> [1] 58:4;	<b>UNIT</b> [4] 35:6; 64:7; 64:8; 98:3;	<b>VERSUS</b> [4] 38:1; 38:12; 90:11;	98:24;
<b>TREMENDOUSLY</b> [1] 105:20;	<b>UNITS</b> [5] 7:3; 86:9; 86:11; 86:12;	90:12;	<b>WELCOME</b> [1] 2:5;
<b>TRIAL</b> [1] 7:13;	88:11;	<b>VIALE</b> [1] 28:20;	<b>WELLHEAD</b> [1] 14:8;
<b>TRIANG</b> [1] 39:20;	<b>UNIVERSE</b> [1] 103:12;	<b>VICINITY</b> [2] 84:3; 84:14;	<b>WELLS</b> [59] 6:7; 11:11; 23:1;
<b>TRICHLOROETHYLENE</b> [3]	<b>UNLESS</b> [2] 36:6; 53:19;	<b>VIEW</b> [2] 15:13; 66:7;	23:1; 23:8; 23:17; 23:19; 23:20;
20:23; 20:24; 55:14;	<b>UNTIL</b> [10] 13:12; 70:14; 74:9;	<b>VIEWED</b> [2] 15:1; 67:14;	24:11; 24:12; 27:2; 27:11; 32:13;
<b>TRIED</b> [4] 53:6; 53:9; 53:22; 54:6;	91:21; 92:19; 94:8; 97:12; 97:15;	<b>VIEWING</b> [1] 99:9;	32:13; 32:21; 33:16; 36:1; 37:18;
<b>TRUE</b> [7] 27:12; 30:16; 44:10;	98:20; 104:11;	<b>VIRTUALLY</b> [1] 105:22;	37:22; 37:23; 37:23; 38:17; 41:24;
61:18; 83:12; 120:8; 120:11;	<b>UP</b> [78] 3:8; 3:23; 4:16; 4:17; 6:25;	<b>VISIT</b> [1] 106:7;	45:6; 45:14; 45:25; 46:13; 47:10;
<b>TRY</b> [16] 8:14; 8:16; 15:24; 23:16;	7:3; 7:25; 9:2; 13:19; 14:5; 14:16;	<b>VISITOR</b> [2] 59:14; 59:16;	48:5; 48:8; 51:14; 52:22; 54:18;
29:22; 32:11; 34:4; 43:10; 51:8;	21:4; 22:7; 22:23; 24:4; 24:5;	<b>VITTHAL</b> [5] 1:14; 18:6; 27:22;	54:23; 56:1; 56:3; 56:19; 57:6;
53:22; 55:2; 55:7; 57:7; 67:8;	24:18; 24:21; 24:25; 25:12; 25:16;	29:13; 97:3;	58:1; 58:11; 60:16; 77:5; 77:21;
68:12; 119:2;	25:17; 25:22; 28:4; 29:4; 29:6;	<b>VOLATILES</b> [1] 92:2;	77:24; 78:2; 78:18; 78:21; 80:3;
<b>TRYING</b> [16] 5:11; 16:12; 32:17;	32:3; 37:4; 37:21; 40:8; 40:9;	<b>VOC</b> [3] 19:18; 28:21; 108:4;	81:1; 81:23; 82:1; 82:11; 83:5;
33:10; 35:20; 35:23; 43:22; 54:1;	40:11; 40:14; 40:19; 40:20; 44:17;	<b>VOCS</b> [14] 2:17; 4:10; 6:6; 10:15;	83:24; 84:2; 84:3; 84:9; 84:13; 119:3;
54:2; 54:4; 82:18; 86:6; 95:1;	46:8; 49:15; 50:8; 53:12; 54:7;	20:4; 20:7; 38:10; 40:13; 43:23;	<b>WENT</b> [9] 21:3; 24:5; 24:18;
96:13; 109:8; 114:20;	58:13; 58:19; 59:18; 63:25; 65:13;	50:24; 84:17; 84:19; 93:18; 106:23;	24:25; 25:23; 50:2; 50:5; 99:22;
<b>TUESDAY</b> [1] 82:9;	67:10; 69:19; 69:24; 70:14; 71:4;	<b>VOICE</b> [2] 74:13; 75:13;	114:9;
<b>TUNNEL</b> [1] 104:3;	71:6; 73:23; 74:16; 75:7; 77:21;	<b>VOLUME</b> [4] 7:24; 35:18; 35:19;	<b>WEST</b> [3] 40:11; 41:8; 44:14;
<b>TURN</b> [2] 17:3; 27:10;	78:1; 78:4; 79:13; 79:18; 79:23;	35:21;	<b>WESTSTATES</b> [1] 31:22;
<b>TURNED</b> [4] 29:6; 32:6; 53:9;	81:1; 81:18; 85:22; 86:3; 86:22;	<b>- W -</b>	<b>WESTSTATES'</b> [1] 32:1;
53:10;	87:13; 88:15; 89:1; 89:16; 93:4;	=====	<b>WETLANDS</b> [2] 100:3; 100:4;
<b>URNS</b> [1] 28:15;	93:7; 97:1; 98:7; 100:16; 101:16;	<b>WAIT</b> [4] 69:11; 74:8; 97:14; 108:3;	<b>WHATEVER</b> [9] 5:14; 7:3; 31:3;
<b>TWEAKING</b> [1] 3:2;	104:9; 112:21;	<b>WAITING</b> [1] 2:11;	44:20; 45:4; 51:5; 83:3; 86:21; 92:7;
<b>TWICE</b> [5] 3:21; 3:24; 4:3; 6:24;	<b>UPDATE</b> [1] 18:8;	<b>WANTED</b> [15] 3:18; 4:14; 34:18;	<b>WHATSOEVER</b> [1] 102:9;
10:14;	<b>UPGRADIENT</b> [5] 56:15; 56:20;	52:4; 52:12; 57:4; 61:3; 67:4;	<b>WHEEL</b> [1] 101:13;
<b>TWO</b> [22] 6:3; 6:7; 22:11; 22:14;	57:13; 79:14; 81:16;	72:12; 73:13; 73:21; 75:7; 88:21;	<b>WHEELER</b> [5] 1:12; 1:14; 1:17;
29:4; 29:19; 37:10; 37:16; 37:16;	<b>UPPER</b> [4] 46:8; 59:18; 76:21;	99:6; 101:11;	3:9; 27:15;
37:22; 38:1; 38:11; 43:22; 50:5;	76:21;	<b>WANTING</b> [1] 44:5;	<b>WHEELS</b> [1] 27:17;
64:9; 66:11; 84:5; 89:20; 98:24;	<b>URS</b> [1] 1:15;	<b>WASHINGTON</b> [1] 32:4;	<b>WHENEVER</b> [2] 65:9; 65:14;
104:1; 111:10; 119:6;	<b>USA</b> [1] 1:18;	<b>WASTE</b> [5] 8:19; 45:16; 46:18;	<b>WHEREAS</b> [1] 20:23;
<b>TWO-COLUMN</b> [1] 114:2;	<b>USABLE</b> [1] 108:7;	48:4; 100:4;	<b>WHEREVER</b> [1] 43:10;
<b>TWO-MONTH</b> [3] 6:2; 11:15;	<b>USE</b> [8] 8:16; 16:15; 36:12; 42:10;		<b>WHETHER</b> [8] 14:25; 44:14;
93:14;	63:19; 78:1; 105:7; 118:21;		69:7; 75:10; 76:13; 86:21; 90:24;

July 16, 1998

SKINNYSCRIPT

WHILE [5] 54:12; 89:14; 95:2;  
 97:10; 106:11;  
 WHO'S [3] 68:15; 101:18; 101:18;  
 WHOLE [9] 27:4; 33:4; 46:15;  
 62:17; 65:13; 97:15; 102:10;  
 115:12; 116:6;  
 WHOSE [1] 104:6;  
 WIDE [1] 80:11;  
 WIFE [1] 63:16;  
 WILL [40] 3:16; 5:10; 7:6; 7:17;  
 8:25; 13:16; 13:18; 13:19; 16:21;  
 18:10; 19:1; 22:12; 22:16; 24:17;  
 27:6; 27:19; 29:11; 29:11; 31:25;  
 35:20; 36:25; 43:19; 40:24; 66:2;  
 67:17; 69:14; 71:21; 75:2; 75:4;  
 76:5; 81:9; 86:7; 88:11; 90:16;  
 95:4; 103:19; 104:18; 117:13;  
 117:19; 118:23;  
 WILLING [3] 87:10; 87:16; 87:21;  
 WISH [1] 14:19;  
 WISHING [1] 86:6;  
 WITHOUT [4] 17:20; 87:17;  
 90:19; 93:24;  
 WON'T [7] 13:11; 31:16; 51:24;  
 53:1; 65:8; 107:6; 114:12;  
 WONDER [2] 14:25; 44:13;  
 WONDERING [1] 116:21;  
 WOOD [1] 108:20;  
 WOODWORK [1] 104:14;  
 WORD [1] 73:3;  
 WORDS [3] 19:10; 83:2; 102:6;  
 WORK [27] 2:12; 13:19; 15:8;  
 16:21; 17:9; 25:25; 30:22; 33:11;  
 37:11; 45:13; 54:3; 54:6; 56:11;  
 57:5; 62:12; 64:6; 70:15; 91:21;  
 91:24; 95:15; 98:21; 99:1; 99:3;  
 99:4; 99:5; 101:19; 113:24;  
 WORKED [2] 35:4; 71:25;  
 WORKING [9] 2:20; 12:15;  
 17:22; 32:23; 45:10; 70:21; 71:22;  
 104:2; 119:1;  
 WORKS [4] 7:9; 17:14; 100:11;  
 104:5;  
 WORRY [2] 3:1; 89:20;  
 WORSE [2] 65:11; 86:18;  
 WORTHWHILE [1] 69:17;  
 WP [1] 46:17;  
 WP-1 [2] 46:2; 46:5;  
 WP-2 [1] 46:2;  
 WP-3 [2] 46:3; 46:8;  
 WRITE [2] 91:7; 91:8;  
 WRITING [3] 91:10; 94:16; 115:12;  
 WRONG [3] 46:14; 70:3; 110:6;  
 WROTE [1] 9:18;  
 =====  
 - Y -  
 =====  
 YAKIMA [1] 32:5;  
 YEAR [10] 37:18; 38:2; 38:18;  
 64:17; 70:10; 86:7; 94:2; 94:7;  
 98:13; 98:20;  
 YEARS [9] 26:2; 42:15; 48:10;  
 51:21; 79:19; 101:14; 105:2; 105:6;  
 108:5;  
 YESTERDAY [2] 74:12; 83:20;  
 YET [6] 8:12; 18:3; 40:19; 42:9;  
 58:10; 106:23;  
 YOURSELVES [1] 52:11;


=====  
 - Z -  
 =====  
 ZERO [3] 60:14; 102:11; 102:16;  
 ZONE [25] 22:19; 23:10; 23:24;  
 23:25; 24:1; 24:3; 24:16; 24:20;  
 24:24; 24:24; 25:3; 25:8; 25:10;  
 25:12; 25:13; 25:15; 25:17; 25:19;  
 25:20; 25:20; 43:1; 47:22; 83:23;  
 98:5; 117:6;  
 ZONES [1] 25:11;



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MEETING ATTENDANCE RECORD**

**SUPERFUND RPM MEETING  
July 16, 1998**

*Please print the information requested below and pass this sheet along to the next person. Thank you.*

<u>NAME</u>	<u>COMPANY/AGENCY NAME, ADDRESS, PHONE</u>
Charles L. Buril	JPL - 4800 Oak Grove Drive, M/S 171-225, Pasadena, CA 91109 (818) 354-0180
Judith A. Novelly	JPL - 4800 Oak Grove Drive, M/S 171-225, Pasadena, CA 91109 (818) 354-8634
ALEX ARLOS	AWQCB - 101 CENTRE PLAZA DIL, MONTEREY PARK 213-266-2583
Richard Gebert	DTSC - 1011 N. Grandview Ave. Glendale, CA 91201 (818) 551-2859
Mark Ripperda	EPA-75 Hawthorne Str., SF, CA 94105 Mail Code SFD-8-3 (415) 744-2408
Stephen Niou	URS, 1241 E. Dyer Rd., #250, Santa Ana, CA 92705 (714) 556-9260
VITTHAL HOSANCAJI	Foster Wheeler Env. Corp. - 611 Anton Blvd #800 Costa Mesa CA 92626 (714) 444-5527
Mark Cutler	Foster Wheeler Env. Corp. - 611 Anton Blvd. #800 Costa Mesa CA 92626 (714) 444-5526
B.G. Randolph	Foster Wheeler Env. Corp. - 611 Anton Blvd, Ste 800, Costa Mesa, CA 92626 714/444-5527
Peter Robles J.	NASA Mgt Office (NMO) - JPL 4800 Oak Grove Drive, M/S 180-801, Pasadena CA 91109
	

(818)  
393-  
2420